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On an increasingly interconnected and rapidly shrinking globe, the important issue for policymakers is not simply how well the economy is doing, but how well is the economy doing relative to its global partners and competitors. This issue, led by Patricia Capdevielle and Mark Sherwood's summary of the need for international comparisons and the programmatic responses at the Bureau of Labor Statistics, is devoted to ways to answer those questions.

Constance Sorrentino and Joyanna Moy examine the similarities and differences among the U.S. labor market and those in other countries. One important difference they note between European and North American labor markets is in the duration of unemployment. A higher proportion of the unemployed in Europe are long-term unemployed at any stage of the business cycle. "Thus," say the authors, "the burden of unemployment tends to fall on a smaller portion of the population in Europe, while in the United States and Canada, a greater percentage of the population experiences a spell of unemployment over the course of a year."

Chris Sparks, Theo Bikoi, and Lisa Moglia examine the critical competitive variable of compensation costs in manufacturing across countries. They conclude, "Over the past 25 years, the U.S. competitive position with regard to hourly compensation costs has improved relative to competitors, especially Japan and Europe, despite some deterioration over the final 5 years of the 20th century."

Aaron Cobet and Gregory Wilson survey comparative productivity trends in the manufacturing sector. Looked at over the last half of the 20th century, labor productivity in the factory increased less in the United States and Canada than in other industrial countries. Most of the difference can be attributed to the 1950–73 period. After 1973, growth in U.S. productivity

actually accelerated while there were much slower rates of productivity growth in most other industrial economies.

Katharine Abraham receives Shiskin Award

Katharine G. Abraham, Professor of Survey Methodology and Affiliate Professor of Economics with the Joint Program for Survey Methodology at the University of Maryland, and formerly Commissioner of the Bureau of Labor Statistics, is the recipient of the 2002 Julius Shiskin Award for Economic Statistics.

Dr. Abraham has written extensively on labor-market subjects including the effects of job duration on wages, the effects of advertising on job vacancies, wages and the business cycle, and comparisons among the United States, European, and Japanese labor markets.

As Commissioner from 1993 through 2001, Dr. Abraham instituted improvements in consumer, producer, and international price statistics, and employment and wage statistics. During the public debate on the Consumer Price Index, Dr. Abraham steered a careful course of studying shortcomings and making revisions based on objective research. She expanded coverage of the prices of services in the Producer Price Index and instituted improvements in the Current Employment Statistics program, including the substitution of a probability sample for the quota sample.

The Julius Shiskin Award was established in 1979 by the Washington Statistical Society and is now co-sponsored with the National Association of Business Economists and the Business and Economics Statistics Section of the American Statistical Association. It is given in recognition of unusually original and important contributions in the development of economic statistics or in

the use of economic statistics in interpreting the economy.

Jobless rate 35.9 percent for dropouts

While more than 60 percent of high school graduates enrolled in college between October 2000 and October 2001, slightly more than half a million youths dropped out of high school during the same period. The unemployment rate for these dropouts was 35.9 percent in October 2001—a full 15 percentage points higher than the rate for recent high school graduates who were not enrolled in college.

Just more than two-thirds of young white dropouts were in the labor force, either working or looking for work, as were about 70 percent of Hispanic dropouts. The unemployment rate among white dropouts was 32.4 percent, about the same as the rate of 32.6 percent for Hispanic dropouts. Not quite half of black dropouts were in the labor force in October 2001; just more than half of those labor force participants had jobs. Additional information is available from "College Enrollment and Work Activity of 2001 High School Graduates," news release USDL 02–288.

Elderly budget greatest share on housing

Households headed by someone 75 or older spent a higher share of their expenditures on housing than any other age group in 1999. The 75-and-older group spent 35.9 percent of expenditures on housing, compared with 32.6 percent for all households. Those under age 25 allocated the smallest share for housing, at 30.3 percent of annual expenditures. Households headed by a person aged 55 to 64 spent 30.7 percent of their budget on housing. Find out more in "Housing Expenditures," *Issues in Labor Statistics,* BLS Summary 02–02. ☐

International comparisons

Providing comparable international labor statistics

BLS adjusts foreign data to a common conceptual framework, thereby aiding users in making meaningful international comparisons

Patricia Capdevielle
and
Mark K. Sherwood

The Bureau of Labor Statistics (BLS) produces many statistical series for the United States which describe important aspects of U.S. economic performance. For example, data show that over the last 40 years the number of employed persons has doubled. Hourly compensation costs for production workers in the manufacturing sector have grown from a little more than $6 per hour in 1975 to almost $20 per hour in 2000. Over the last 50 years, labor productivity in the manufacturing sector has increased about 3 percent per year, resulting in more than a quadrupling of the output produced per hour of labor input.[1]

But, how does this compare with the rest of the world? A comparison of U.S. performance with that of other countries is of interest to many data users from the academic, government, business, and labor sectors.

Several difficulties arise in making these comparisons, however. Foreign labor statistics are not always easily accessible, and publications containing the data may not be in English. The foreign statistics may not be comparable to U.S. data because of differences in concepts and definitions, classification systems, and survey methodology, and may be of uneven quality among countries.

The BLS Division of Foreign Labor Statistics provides a set of easily accessible labor statistics adjusted for comparability to aid users in making meaningful international comparisons. BLS selects a conceptual framework for comparative purposes; obtains foreign data and documentation from many sources and translates the material into English when necessary; analyzes sources and methods to assess quality and comparability; and adjusts statistical series where necessary and feasible for greater comparability.

BLS publishes statistics adjusted for comparability on labor force, employment and unemployment; productivity and unit labor cost trends in the manufacturing sector; and hourly compensation costs for production workers in all manufacturing and in component manufacturing industries. In addition, statistics are published on gross domestic product (GDP) per capita and per employed person and on consumer price indexes (CPIs), although these latter two series are not adjusted for comparability. The measures produced relate primarily, but not entirely, to the major developed countries which are the most similar to the United States.

The BLS program of international comparisons is unique. Other national statistical agencies publish some international comparisons, and international statistical agencies publish statistics collected within a common set of guidelines from a large number of countries. With

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few exceptions, however, data are not adjusted for comparability by these other agencies.

A summary listing of the major international statistical agencies and their work is contained in an appendix to this article. The BLS Web site provides links to these agencies to enable users to find data that are complementary to the BLS series. Links are also provided to sources of international data for topics not covered by BLS.[2]

This article presents a historical perspective on BLS international comparisons and provides a brief overview of the current program. It also examines the the reasons why foreign data must be adjusted for comparability and the procedures used by BLS to adjust the data. Some examples of differences between adjusted and unadjusted data series are presented.

Background and current measures

As early as the turn of the last century, Carroll Wright, the first Commissioner of what would become the Bureau of Labor Statistics, sent staff to Europe and obtained the services of experts to collect information for studies of labor developments abroad.[3]

Two reports, *Sixth Annual Report of the Commissioner of Labor, 1890, Cost of Production: Iron, Steel, Coal, etc.* and *Seventh Annual Report, 1891, Cost of Production: The Textiles and Glass* [sic] were concerned chiefly with aggregate and unit costs of production, employee earnings, "efficiency" of labor, and cost of living in the United States. The reports included similar data from England and Continental Europe, many of which were compiled in detail directly from plant records.[4]

Several early bulletins were published with an international comparison content, including a 1898 bulletin entitled *Wages in the United States and Europe, 1870–1898*, and a 1902 bulletin on labor conditions in Mexico, a subject of considerable current interest. The first volume of the *Monthly Labor Review* in 1915 contained articles on employment in various countries, the increase in wages in Great Britain during 1915, and strikes and lockouts in various countries.

The current BLS international comparisons program came into being in the early 1960's. Early work focused on statistics adjusted for comparability on labor force, productivity and unit labor costs, and hourly compensation costs, and also on consumer price trends. Over time, other statistics were published also, some of which are no longer produced.[5] Special studies have been produced as well on labor force and productivity research topics.

All the foreign country data now used by BLS are obtained from secondary sources—national statistical agencies, supranational and international organizations, and private agencies such as research institutes. BLS does not initiate surveys or data collection abroad.

Labor force. A major project to evaluate foreign unemployment statistics and prepare data adjusted for comparability was undertaken in response to a 1961 request by the Committee to Appraise Employment and Un- employment Statistics (sometimes referred to as the Gordon Committee). They were concerned that the reason for apparent differences in unemployment rates among countries was due to national differences in definitions and methodologies. The initial study covered the United States, Canada, Japan, France, Germany, Italy, Sweden, and Great Britain and was published in the Gordon Committee report in 1962.[6] The results were also summarized in two *Monthly Labor Review* articles.[7]

Over time, the number of countries covered has increased to 10 and the number of variables produced has increased also.[8] The labor force statistics adjusted for comparability now include working-age population, labor force, employment, unemployment, employment-population ratios, labor force participation rates, unemployment rates, and employment by economic sector. Some data are available by sex and age. These statistics are updated and published semi-annually. The series extends back to 1959 or 1960.

Monthly unemployment rates adjusted for comparability are published each month for nine of the countries. These data are supplemented with a compilation of unemployment rates for additional European countries as published by Eurostat, the Statistical Office of the European Communities.

Data from the program have been used to produce studies on youth unemployment; labor force participation rates; and employment by sector.[9] Over the years, special studies were prepared on additional topics in the labor force field. These topics include unemployment compensation; the family; various measures of underutilization; and explanations for the reported relatively low unemployment in Mexico and Japan.[10]

Research continues on issues of comparability. In 2000, an indepth study of the comparability of various available series pertaining to unemployment rates was published and served as the foundation for recent refinements made to the BLS comparative series on unemployment rates.[11]

Productivity and unit labor costs. One of the first projects undertaken in the productivity and unit labor costs area was the development of international comparisons of levels of labor productivity (output per hour) and unit labor costs in the steel industry. The steel industry was selected because of its rank among basic industries in terms of size, public interest, and availability and comparability of data. Because of the record levels of imports of steel products and the volume of international trade in steel products, there was

considerable interest in the findings of such a study.

The first statistics produced were comparative trends only, while work proceeded on comparative level data. Statistics on comparative levels of labor productivity and unit labor costs in the steel industry were published in 1968.[12] The study covered the United States, France, Germany, and the United Kingdom. Japan was added shortly thereafter. The level estimates were updated with trend inducators through the early 1980's, but discontinued thereafter.

The comparison of productivity levels for the steel industry was possible because the output data were available in quantity terms, that is, tons of different steel products. In most cases, when the output of each country's sector of interest is expressed in national currency units, estimating comparative levels of productivity is not feasible because of the problem of expressing the output of several countries in a common currency.

Purchasing power parities (PPPs), which are the number of foreign currency units required to buy goods and services in a foreign country equivalent to what can be bought with one dollar in the United States are available to convert aggregate GDPs of foreign countries into U.S dollars. (See also the section on measures of GDP per capita and per employed person.) PPPs are not available at an industry level.

Because of the problems associated with developing comparative levels of productivity,[13] the BLS program for the manufacturing sector has focused on comparative *trends* in productivity and unit labor costs. Trends may be calculated without converting data for all countries to a common currency.

The current series on comparative trends in labor productivity and unit labor costs in manufacturing has its roots in two 1963 *Monthly Labor Review* articles on the role of labor costs in foreign trade and on concepts and methods for international comparisons of unit labor costs.[14] A 1964 article presented measures of unit labor cost trends for the United States and seven foreign countries.[15] Labor productivity measures were included for four countries.

Indexes of manufacturing productivity and unit labor costs now cover 14 countries or areas and are updated and published annually.[16] Indexes for component variables, including output, employment, hours worked, and compensation, as well as various supplementary measures, also are published. The series extends back to 1950 for most countries.

Over time, special studies were prepared to provide other comparative productivity measures. Two studies were produced on multifactor productivity, which includes capital services as well as labor hours as inputs. A 1990 study evaluated alternative measures of capital in Japanese manufacturing.[17] A study of multifactor productivity trends in France, Germany, and the United States was published in 1995.[18]

Studies also were produced on labor productivity trends for industries within the manufacturing sector at approximately the U.S. two-digit standard industrial classification (SIC) level. They were released as three conference papers.[19]

GDP per capita and per employed person. A series on *levels* of GDP per capita (a measure of standard of living) and GDP per employed person (a measure of productivity levels for the total economy) were initiated in the mid-1970s.[20] BLS was one of the first organizations to construct these series using Purchasing Power Parities (PPPs).[21] This series covers 14 countries and provides annual measures back to 1960. It is updated and published periodically. The underlying data on GDP and population are not adjusted for comparability; labor force data used are adjusted.

The BLS method of converting GDP to a common currency by means of PPPs was introduced as an alternative to a flawed method often used, converting foreign data into U.S. dollars with market exchange rates.

Comparisons based upon exchange rates do not necessarily reflect the relative purchasing power of different currencies. At best, market exchange rates represent only the relative prices of goods and services that are traded internationally, not the relative value of total domestic output which includes goods and services not traded internationally. Exchange rates are also affected by influences unrelated to the relative values of goods and services, such as currency traders' views of the stability of foreign governments, relative interest rates in different countries, and incentives for holding assets in one currency versus another.

Hourly compensation costs for production workers in manufacturing. The need for comparable measures of wages and employer labor costs was the impetus for the development of the BLS hourly compensation costs series. The more readily available average earnings statistics published by many countries can be very misleading. National definitions of earnings differ considerably, earnings do not include all items of labor compensation, and the omitted items of compensation frequently represent a large proportion of total compensation.

The problems in making meaningful comparisons of wages among countries were noted in two studies published in the 1960s pertaining to U.S.-Japan wage comparisons. A joint report of the Japanese Ministries of Labor and of International Trade and Industry and the U.S. Department of Labor was prepared in 1966.[22] The report was intended to provide both countries with better information about labor standards, employment conditions, wages, and other aspects of labor policy in order to avoid misconceptions affecting trade relations. In 1967, two *Monthly Labor Review* articles used data from this report to discuss the similarities and contrasts

Exhibit 1.	Current program of international comparisons of labor statistics		
Series	**Variables included**	**Number of countries covered**	**Time frame**
Labor force	Labor force, employment, unemployment and various analytical measures	10	Annual since 1960
	Unemployment rates	9	Monthly and quarterly for recent periods
Manufacturing productivity and unit labor costs	Output per hour, unit labor costs, output, hours worked, compensation, and several related variables	14	Annual since 1950
Hourly compensation costs for production workers in manufacturing and 40 component industries	Hourly compensation, components of compensation	29	Annual since 1975
Consumer Price Indexes	"All items" index	16	Annual since 1950
	Changes from same period in prior year for "all items" index	9	Monthly and quarterly for recent periods
GDP per capita and per employed person	Two primary series plus underlying series	14	Annual since 1960

between the two countries' wage systems.[23] The articles noted that both countries have well-developed statistical systems and publish data regularly, but the data are not comparable and careful attention must be given to the differences when making international comparisons.

BLS computed measures of hourly compensation costs covering production workers in manufacturing by adjusting published earnings data for items of compensation not included in earnings. Hourly compensation costs are defined by BLS to include pay for time worked, other direct pay (including such items as seasonal bonuses and pay for holidays and vacations) and employer social insurance expenditures and other labor taxes (including such items as retirement and disability, health insurance, pensions, and unemployment insurance).

BLS initially released data on an ad hoc basis in response to requests for comparative compensation costs. By 1980, the series had been formalized and made available, on an unpublished basis, for 32 countries or areas and 34 manufacturing industries. Coverage now includes 29 countries or areas and 40 manufacturing industry groups.[24]

For total manufacturing, comparable data were developed for two major subcomponents of hourly compensation—pay for time worked and total direct pay—and for the structure of compensation. Also, hourly compensation costs were developed for selected groups of countries or areas by aggregating costs with weights representing importance to the United States in world trade.

Hourly compensation costs for total manufacturing, and supplementary tables covering the components of compensation, are updated and published annually. Data for component manufacturing industry groups are updated and published periodically. The series extends back to 1975.

Consumer price indexes (CPIs). Data were first published in two 1960s articles which presented comparative consumer

price trends, including trends for major component expenditure groups; summaries of factors affecting price movements; and descriptions of countries' index coverage and methodologies.[25] In addition, the consumer price indexes were used to compute real wage trends as part of a program examining comparative standards of living.[26]

BLS now compiles and publishes annual consumer price indexes for 16 countries. In addition, monthly and quarterly percent changes from the same period of the previous year are published each month for nine countries.

The CPI series are not adjusted for comparability. Rather, the data are national indexes as published by the foreign countries. National differences exist, for example, with respect to population coverage, frequency of market basket changes, and treatment of homeowner costs.

The current program of international comparisons of labor statistics is summarized in exhibit 1. Details about the current program may be found on the BLS Web site.

Adjusting data for comparability

Following is a description of the types of adjustments BLS makes in producing comparable statistics with some examples of the impact of these adjustments.

Chart 1. Official national unemployment rates and rates adjusted to U.S. concepts, 2000
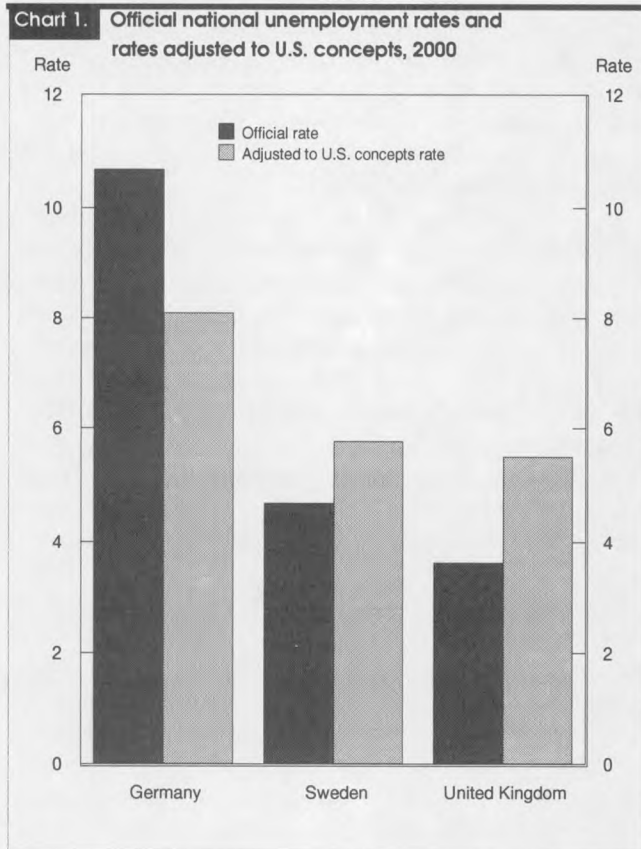
Unemployment rates. The labor force is the sum of the employed plus the unemployed; and the unemployment rate is the ratio of the unemployed to the labor force. In the United States, the unemployed are those who were without work and available for work in the reference week, and actively seeking work in the past 4 weeks. Those persons waiting to be recalled from layoff need not be seeking work to be classified as unemployed. The employed are those persons who during the reference week did work for at least 1 hour as paid employees, worked in their own business, profession, or on their own farm, or worked 15 hours or more as unpaid workers in an enterprise operated by a family member. Those temporarily absent from work but who had jobs or businesses to return to are also counted as employed. In the United States, data to measure the employed and the unemployed are obtained from the Current Population Survey, a survey of households selected to be representative of the civilian noninstitutional population.

Some of the countries included in the BLS comparative unemployment rate series differ from the United States in terms of the definitions of the employed and unemployed, as well as in terms of the sources of data used to measure these variables. BLS employs data from several sources, including data obtained by special request from the central statistical offices of the foreign countries, to adjust the official unemployment rates for approximate comparability with U.S. concepts.

Although the United States and the foreign countries covered follow the International Labour Organization's (ILO) guidelines on measuring employment and unemployment, there is sufficient latitude in the guidelines to allow for differences in the measurement of unemployment rates among countries. The ILO guidelines define the unemployed as persons over a certain age who are without work, available for work, and actively seeking work. Although adhering to this broad standard, countries vary in interpretation of "available for work," "actively seeking work," and "over a certain age." Further, the ILO offers some more specific guidelines regarding the treatment of students, persons on layoff, persons waiting to start a new job, unpaid family workers, and the armed forces. Some countries deviate from these specific guidelines.

The European Union (EU) and the United States diverge while adhering to the ILO guidelines:

• unlike the United States, the European labor force includes unpaid family workers working less than 15 hours per week, the career military, and 15-year-olds;

• unlike the United States, European unemployed includes passive jobseekers, person waiting to start a new job who did not seek work in the previous 4 weeks, those unavailable for work in the reference week, and 15-year-olds;

• unlike the United States, European unemployed excludes persons on layoff; and

Chart 2. Hourly earnings and hourly compensation costs for production workers in manufacturing, 2000

- Hourly earnings
- Hourly compensation costs
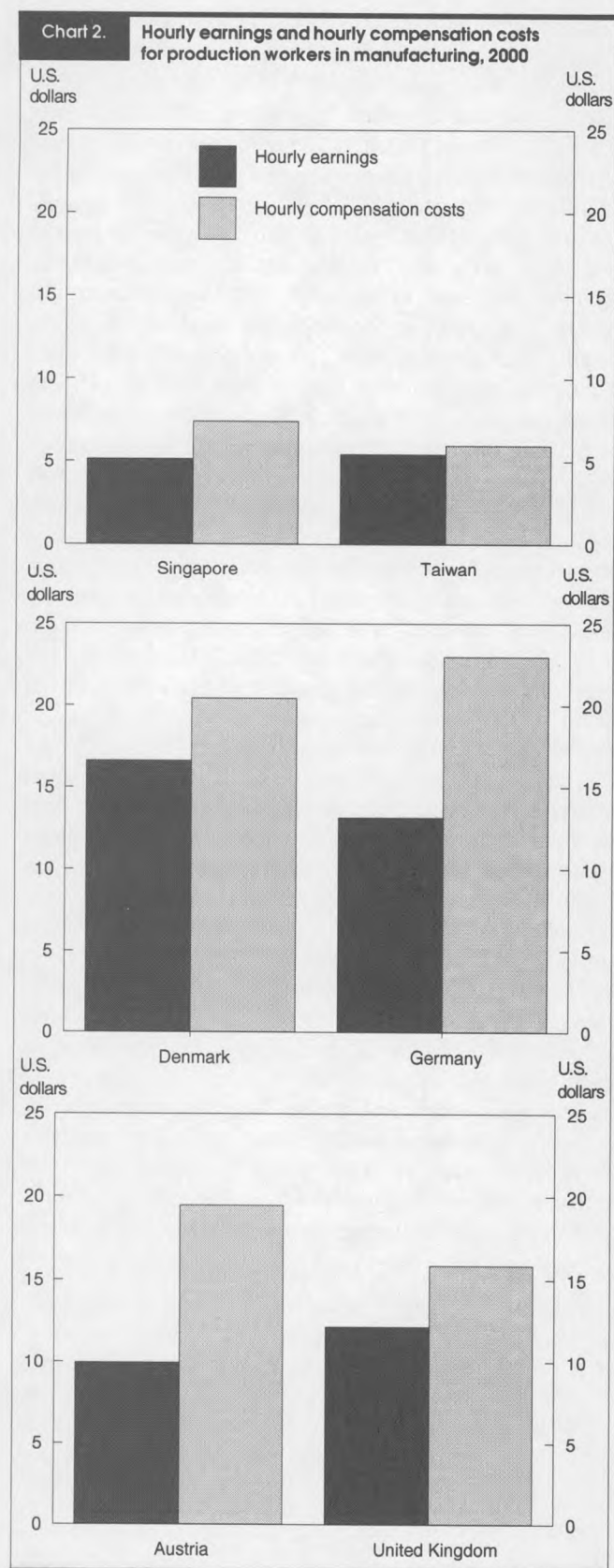
• even within Europe, EU member countries can vary from the interpretation of the ILO standard adopted by the EU when producing their own official unemployment rates.

An important example of the need for adjustment occurs for Sweden, which deviates from the ILO guideline that considers full-time students to be unemployed if they are seeking work and available for work. In Sweden, such students are excluded from the unemployed in the calculation of the official unemployment rate.

Statistics Sweden regularly enumerates and publishes statistics on full-time students seeking work and available for work. These data are derived from its labor force survey. Using the published estimates for those students, BLS adds them to the Swedish unemployed and adds the adjusted unemployed to the employed to derive the labor force. An adjusted unemployment rate is then calculated as the adjusted unemployed divided by the adjusted labor force.[27]

It is also necessary to adjust data when statistical agencies derive official statistics from different types of data sources. While most countries that BLS covers derive their official unemployment rates from household surveys, the United Kingdom and Germany derive them from administrative records of the registered unemployed obtained from their employment offices. For the United Kingdom, the official data are restricted to "claimant counts" that understate the country's unemployment relative to household survey definitions. On the other hand, the German administrative data overstate unemployment rates relative to household surveys, because the administrative data include persons who are looking for a better job but who would be considered employed in a household survey.

The British Office of National Statistics supplies BLS with unemployment and labor force data on ILO concepts derived from the national continuous labor force survey, and BLS uses these data instead of the official series based on registration data. BLS subtracts the career military from the labor force and then calculates the unemployment rate. For Germany, BLS uses labor force survey data instead of the official registration-based data. BLS excludes the career military from the labor force; no adjustments are made to the unemployed.

Unemployment rates based on U.S. concepts contrasted with the official unemployment rates illustrate the distorted picture one can get from comparing official statistics. (See chart 1.) Adjusted unemployment rates are about 1 percent to 2 percent higher than the official rates for Sweden and the United Kingdom, respectively, and about 2-1/2 percent lower for Germany.

Early in the BLS program of labor force comparisons, more adjustments were required then than now. Over time, there has been a convergence of methods among countries leading to more comparability among the official measures. In several

cases, the differences that remain are small; particularly, those due to variations in the interpretations of the ILO guidelines by the United States and the European Union.

Differences still exist, however, and require both adjustment by BLS and continuous research to assess the importance of any remaining noncomparability due to differences in concepts and methods. A study summarized in a 2000 *Monthly Labor Review* article resulted in the recent introduction of a new adjustment into the Canadian data in the BLS comparative series.[28]

Hourly compensation costs for production workers in manufacturing. This series on comparative hourly compensation costs was developed by BLS as a substitute for the more readily available average earnings series published by many countries. National definitions of earnings differ considerably and average earnings do not include all items of labor compensation. National data may also differ in terms of worker coverage, industrial classification, survey coverage, and sample benchmarks. BLS computes hourly compensation costs by adjusting published earnings for the items of compensation not included in earnings.[29] The statistics are also adjusted, where necessary and feasible, for other differences in the national data sources.

The adjustments made to derive hourly compensation costs can be illustrated with a summary of the method used for Austria. Average hourly earnings are obtained for the "total industry" sector; these earnings are adjusted by BLS to remove the earnings of the heat and gas, construction, and mining industries in order to yield an estimate for the manufacturing sector.

Next, data from a survey of employers regarding expenditures on wages, salaries, employee benefits, and other labor costs are used to derive ratios of components of additional compensation to earnings. The additional compensation includes pay for time not worked (for example, vacations), bonuses, legally required and contractual and private social insurance (for example, pensions and health insurance) and other labor taxes. These ratios are estimated for other years using a variety of indicators and are applied to average hourly earnings to compute hourly compensation costs.

A comparison of the BLS hourly compensation costs with earnings statistics for selected countries illustrates the importance of adjusting the data for comparability. (See chart 2.) Here, the rankings within three pairs of countries or areas (Singapore and Taiwan; Denmark and Germany; Austria and the United Kingdom) are reversed depending upon whether the measure is of average hourly earnings or of hourly compensation costs.

Output per hour and unit labor costs in manufacturing. For this comparative series, BLS does not adjust countries'

published productivity and unit labor costs. Rather, BLS constructs measures with data obtained from countries' national accounts and other sources. BLS chooses output on as similar a conceptual basis as possible, adjusts countries' output and labor input data to a similar industrial classification, adjusts compensation to an employer-cost basis by adding other taxes, and develops a comparable hours-worked series. Hours-worked data are constructed rather than using more readily available labor input series based upon the concept of number of employees or employed persons. Hours worked is the concept of labor input employed for all domestic measures of productivity produced by BLS.

BLS cannot adjust for all differences which may occur in national accounts data, for example the use of different deflation procedures for the output of high-tech industries or the scheme used to aggregate outputs from various industries. The impact on comparability from these remaining differences likely has increased with the explosion of growth of the outputs of the high-tech sector, as well as the adoption by many countries of new weighting schemes for aggregating output. Because it is not feasible to adjust for all of these differences, BLS has undertaken an assessment of the possible impact on its comparative productivity series from these differences in methodology.

Recently, a detailed examination was carried out of the differences in the underlying series used by BLS to construct comparative measures of productivity growth in the United States and Canada.[30] The productivity gap that existed between the two countries between 1988 and 1996 was examined to determine if the gap might be due in large part to different measurement procedures used by the two countries. Differences due to industrial classification, concepts and estimation of real value added output (including valuation of prices, index aggregation formula, treatment of software, and information technology deflation), and the estimation of hours worked were explored.

The methods used by the two countries were found to be quite similar. Although differences exist, some are offsetting and overall they do not appear to substantially affect measured productivity growth.

Among other countries in the BLS series, there are substantive variations in methods of measuring output and labor input, including the methods used to deflate the output of high-tech industries. BLS is currently conducting a review of sources and methods used in other countries.

Other contributions

BLS contributes to improving the comparability of labor statistics in other important ways. Experts from various BLS programs participate in forums sponsored by various international agencies, the purpose of which is to enhance

comparability of statistics among countries.[31] BLS also provides technical assistance and training to foreign statisticians to aid in developing their statistical systems. These efforts help to achieve greater comparability of data and to reduce the need for adjusting data for the purpose of international comparisons. □

Notes

[1] See *Comparative Civilian Labor Force Statistics, Ten Countries, 1959–2001*, Mar. 25, 2002, table 2. Also, see Chris Sparks, Theo Bikoi, and Lisa Moglia, "A perspective on U.S. and foreign compensation costs in manufacturing," this issue, pp. 36-50, table 1; and Aaron E. Cobet and Gregory A. Wilson, "Comparing 50 years of labor productivity in U.S. and foreign manufacturing," this issue, pp. 51-65, table 1. Available on the Internet at: **http://www.bls.gov/fls/home.htm**

[2] The Web site is: **http://stats.bls.gov/fls/home.htm**

[3] Joseph P. Goldberg and William T. Moye, *The First Hundred Years of the Bureau of Labor Statistics*, Bulletin 2235 (U.S. Department of Labor, September 1985), p. 39.

[4] See William C. Shelton and John H. Chandler, "The role of labor costs in foreign trade," *Monthly Labor Review*, May 1963, pp. 485–90 (footnote 1).

[5] Series which are no longer published include: union membership and industrial disputes; average hours worked and paid; average earnings and real earnings indexes (now incorporated into the program of labor productivity and unit labor costs); consumer price indexes for component expenditure groups; wholesale or producer price indexes; and U.S. Department of State indexes of living cost abroad and living quarters allowances.

[6] *Measuring Employment and Unemployment*, Report of the President's Committee to Appraise Employment and Unemployment Statistics (U.S. Government Printing Office, Washington, DC), September 1962.

[7] See the following *Monthly Labor Review* articles: Robert J. Meyers and John H. Chandler, "International comparisons of unemployment," August 1962, pp. 857–64; and Robert J. Meyers and John H. Chandler, "Toward explaining international unemployment rates," September 1962, pp. 969–74.

[8] The expansion of this series has been directed by Constance Sorrentino of the BLS Division of Foreign Labor Statistics.

[9] See these articles in the *Monthly Labor Review*: Constance Sorrentino, "Youth unemployment: an international perspective," July 1981, pp. 3–15; Constance Sorrentino, "International comparisons of labor force participation, 1960–81," February 1983, pp. 23–36; and Todd M. Godbout, "Employment change and sectoral distribution in 10 countries, 1970–90," October 1993, pp. 3–20.

[10] See the following *Monthly Labor Review* articles: Constance Sorrentino, "Unemployment compensation in eight industrial nations," July 1976, pp. 18–24; Constance Sorrentino, "The changing family in international perspective," March 1990, pp. 41–58; Constance Sorrentino, "International unemployment indicators, 1983–93," August 1995, pp. 31–50; Susan Fleck and Constance Sorrentino, "Employment and unemployment in Mexico's labor force," November 1994, pp. 3–31; Gary Martin, "Employment and unemployment in Mexico in the 1990s," November 2000, pp. 3–18; and Sara Elder and Constance Sorrentino, "Japan's low unemployment: a BLS update and revision," October 1993, pp. 56–63.

[11] Constance Sorrentino, "International unemployment rates: how comparable are they?" *Monthly Labor Review*, June 2000, pp. 3–20.

[12] *International comparison of unit labor cost in the iron and steel industry, 1964: United States, France, Germany, United Kingdom*, Bulletin 1580 (Bureau of Labor Statistics, 1968).

[13] An approach to calculating levels of productivity has been used by researchers at the International Comparisons of Output and Productivity project at the University of Groningen in the Netherlands. They develop unit values for matched products by dividing producers' sales denominated in a country's currency with available data on quantities shipped. Ratios of the unit values from two different countries are then used to convert to a common currency. For an article based on this approach, see Bart van Ark, "Manufacturing prices, productivity, and labor costs in five economies," *Monthly Labor Review*, July 1995, pp. 56–72.

[14] See these articles in the May 1963 *Monthly Labor Review*: William C. Shelton and John H. Chandler, "The role of labor costs in foreign trade," pp. 485–90; and "International comparisons of unit labor costs: concepts and methods," pp. 538–47.

[15] John H. Chandler and Patrick C. Jackman, "Unit labor costs in eight countries since 1950," *Monthly Labor Review*, April 1964, pp. 377–84.

[16] The expansion of this program was carried out under the direction of Arthur Neef, former Chief of the BLS Division of Foreign Labor Statistics.

[17] Edwin Dean, Masako Darrough, and Arthur Neef, "Alternative Measures of Capital Inputs in Japanese Manufacturing," in Charles R. Hulten, ed., *Productivity Growth in Japan and the United States*, National Bureau of Economic Research (Chicago, University of Chicago Press), 1990.

[18] Wolodar Lysko, "Manufacturing multifactor productivity in three countries," *Monthly Labor Review*, July 1995, pp. 39–55.

[19] Arthur Neef and Edwin Dean, "Comparative Changes in Labor Productivity and Unit Labor Costs by Manufacturing Industry: United States and Western Europe," paper presented at the American Enterprise Institute Conference on Interindustry Differences in Productivity Growth, Washington, D.C., October 11–12, 1984; Arthur Neef, "An International Comparison of Manufacturing Productivity and Unit Labor Cost Trends," paper presented at the Social Science Research Council Conference on International Productivity and Competitiveness, Palo Alto, California, October 28–30, 1988; and Arthur Neef, "Comparative Changes in Labor Productivity: United States and Western Europe," paper presented at the Atlantic Economic Conference, session on Recent Productivity Developments in Major Nations, Williamsburg, Virginia, October 13, 1990.

[20] This series was developed by Arthur Neef, former Chief of the BLS Division of Foreign Labor Statistics.

[21] For a discussion of PPPs, see, for example, Michelle A. Vachris and James Thomas, "International price comparisons based on purchasing power parity," *Monthly Labor Review*, October 1999, pp. 3–12.

[22] *Wages in Japan and the United States: Report of the Joint United States-Japan Study* (U.S. Department of Labor and Japan Ministry of Labor and Ministry of International Trade and Industry), 1966.

[23] Janet L. Norwood, "Wages in Japan and the United States," *Monthly Labor Review*, April 1967, pp. 25–28; and Janet L. Norwood, "Composition of wages and supplements: U.S.-Japan comparisons," *Monthly Labor Review*, May 1967, pp. 30–34.

[24] The development of this series from the ad-hoc request stage through the major expansion to 30 countries was directed by Patricia Capdevielle of the BLS Division of Foreign Labor Statistics.

[25] Patricia Capdevielle, "Consumer Price Trends in 14 Industrially Advanced Countries, 1958–67," *Labor Developments Abroad*, August 1968, pp. 15–28; and Patricia Capdevielle "Consumer Price Trends in 14 industrialized Countries, 1958 to June 1969," *Labor Deveoppments Abroad*, December 1969, pp. 12-27.

[26] Articles were published on consumer expenditures and levels of living from household expenditure surveys in nine countries from 1960 to 1965. Data were adjusted as much as possible to identical household type and classification of consumer expenditures. See, for example, Patricia Capdevielle, "Consumer Expenditures and Levels of Consumption of Low Income and of High Income Wage and Salary Workers Households in Nine Industrially Advanced Countries," *Labor Developments Abroad*, September 1969, pp. 23–34. Two other articles relevant to standards of living were John H. Chandler, "Perspectives on poverty 5: an international comparison," *Monthly Labor Review*, February 1969, pp. 55–62; and "Trends in Average Hourly and Real Earnings of Wage Workers in Manufacturing, 10 Countries, 1958–66," *Labor Developments Abroad*, February 1968, pp. 10–17.

[27] BLS also makes small adjustments to the Swedish statistics to add persons age 65 and older into both the official measures of the employed and the unemployed and to subtract career military from the employed.

[28] Constance Sorrentino, "International unemployment rates: how comparable are they?" *Monthly Labor Review*, June 2000, pp. 3–20.

[29] The concept used in the BLS comparative series on hourly compensation costs differs from the ILO concept of labor costs. The cost of recruitment, employee training, and plant facilities and services, such as cafeterias and medical clinics, are included in the ILO concept of labor costs, but not in the BLS comparisons of hourly compensation costs. These items are excluded by BLS because data are not available for many countries.

[30] Lucy P. Eldridge and Mark K. Sherwood, "A perspective on the U.S.-Canada manufacturing productivity gap," *Monthly Labor Review*, February 2001, pp. 31–48.

[31] The appendix provides a listing of major international agencies.

APPENDIX: Labor statistics available from international organizations

The primary focus at BLS is to publish important labor statistics, adjusted for comparability to U.S. concepts, for major developed and developing countries, particularly if adjusted statistics are not available elsewhere. BLS does not cover all labor statistics series, nor does it attempt to cover all the countries in the world.

On the other hand, the primary focus of international statistical agencies is to publish statistics for as many countries as possible, collected from national statistical offices within a common set of guidelines. These agencies provide detailed documentation of national sources and methods. But with few exceptions, the statistics are not adjusted for comparability.

The international statistical agencies promote the international comparability of labor statistics by means of international recommendations on concepts and methods and standard international classification systems. They also publish technical manuals on measurement issues and provide technical assistance and training.

The international (and supranational) agencies with labor statistics programs are:

- International Labour Office (ILO)
- Organisation for Economic Co-operation and Development (OECD)
- Statistical Office of the European Communities (Eurostat)

Other international agencies which publish major labor statistics series include:

- United Nations (UN)
- World Bank
- International Monetary Fund (IMF)

On the BLS foreign labor statistics Web site, links are provided to these agencies for data complementary to the labor statistics which BLS produce:
http://www.bls.gov/fls/availability.htm
Their publications include data for countries not covered by BLS and additional data which supplement the BLS series.

Links are also provided to sources of international data for topics not covered by BLS in a section entitled "People are asking. . .":
http://www.bls.gov/fls/peoplebox.htm
This section will be expanded on an ongoing basis.

International Labour Office (ILO)
Bureau of Statistics and Key Indicators of the Labour Market (KILM) Team
http://www.ilo.org/public/english/bureau/stat/intro/
http://www.ilo.org/public/english/employment/strat/kilm/

The International Labor Office was founded in 1919 and became the first specialized agency of the United Nations in 1946. The ILO's mission is the promotion of social justice and internationally recognized human and labor rights. Almost every country in the world is a member. Among other activities, the ILO supports a comprehensive labor statistics program. The ILO collects labor statistics and publishes them in seven major publications and databases:

Yearbook of Labour Statistics. The *Yearbook* includes 31 tables covering economically active population, employment, unemployment, hours of work, wages, labor cost, consumer prices, occupational injuries, and strikes and lockouts for more than 190 countries, areas, or territories.

The statistics are collected from member countries by means of standardized questionnaires. Data published are carefully documented regarding source, coverage, definitions, and adherence to international standard classifications.

Bulletin of Labour Statistics. The *Bulletin* includes series available monthly and quarterly on employment, unemployment, hours of work, wages, and consumer prices.

Sources and Methods: Labour Statistics. This series of annual *Yearbook* supplements provide the detailed documentation of sources and methods for data published in the *Yearbook* and *Bulletin*.

Statistics on occupational wages and hours of work and on food prices, October Inquiry results. This publication presents statistics for wages and hours of work for 159 occupations in 49 industry groups and prices for 93 food items common throughout the world. Data are collected from national statistical offices by means of a standardized questionnaire.

Key Indicators of the Labour Market. This annual publication presents 20 labor market indicators covering employment and unemployment, wages and labor costs, labor productivity and unit labor costs, educational attainment, and poverty and income distribution. The indicators are carefully documented regarding definitions, sources, and coverage.

Data for the indicators are obtained from existing compilations of other international or national statistical agencies. The statistics are published in a variety of traditional and electronic media, including the annual publication, KILM on CD-ROM, and KILMnet on the Internet.

Economically Active Population 1950–2010. This is the latest publication of periodic projections of the world labor force. It is part of a United Nation interagency project to provide demographic data coordinated and comparable in terms of dates,

data sources, and estimation and projection methods. Data are presented for all member countries by age and gender.

Household Income and Expenditure Statistics. This publication is a periodic compendium of statistics from household income and expenditure surveys. Data are published in standardized tables, along with documentation of coverage and data sources for each country.

ILO-Comparable Annual Estimates of Employment and Unemployment. While most labor statistics published by the ILO are presented in a common framework and carefully documented, they are not adjusted for comparability. The exception is a relatively new program of ILO-comparable annual employment and unemployment estimates, which presently covers 26 countries. The following series are adjusted for conformity with ILO statistical guidelines: working-age population, total and civilian labor force, labor force participation rates, total and civilian employment and employment by age and by economic sector, unemployment by age, and unemployment rates, with selected data also published by sex. Latest data were published in the second quarter 2001 *Bulletin of Labour Statistics.*

LABORSTA. This online database contains the statistics published in the *Yearbook, Bulletin, October Inquiry, and Economically Active Population* publications. It is being expanded to include population census data and the ILO-Comparable Annual Estimates of Employment and Unemployment.

Organisation for Economic Co-operation and Development (OECD)
Statistics and program directorates
http://www.oecd.org/std/

The OECD was first established to administer the Marshall Plan for Europe after World War II. Later, the organization's mission was changed to coordinate economic policy among industrial countries, and the United States and Canada became members. OECD now has 30 member countries, including North American countries, most European countries, Australia, New Zealand, Japan, and Korea. The following are the OECD publications which provide labor statistics:

Labour Force Statistics. This publication provides comprehensive labor force statistics for the 30 member countries: population, components of change in population, by sex and age; total and civilian labor force, employment and part-time employment, unemployment, unemployment rate, and duration of unemployment by sex; and civilian

employment, employees, and professional status by economic activity.

Statistics are presented in a common framework, and national data sources and definitions summarized. Except for standardized unemployment rates, data are not adjusted for comparability.

Quarterly Labour Force Statistics. Quarterly statistics covered are: total labor force, employment, unemployment, unemployment rate, and employment by economic activity for 22 member countries. The publication also includes data on standardized unemployment rates for 25 member countries. (See below.)

Main Economic Indicators. This monthly statistical publication provides a wide range of economic indicators for the 30 member countries and about 10 nonmember countries. Labor indicators included are employment, unemployment, labor compensation, hours of work, job vacancies, and time lost to labor disputes. Historical statistics and additional indicators are available on CR-ROM and online.

Main Economic Indicators: Sources and Definitions. This series of publications contains summary descriptions of sources, concepts and definitions, and methodologies for series published in *Main Economic Indicators.* OECD also publishes specialized methodological publications. Many of these publications are available on the Internet.

OECD Employment Outlook. This annual report provides an assessment of the latest labor market trends and short-term forecasts, and examines in more depth selected labor market developments or issues. It includes labor statistics to support topics for analysis plus a regular statistical annex showing key labor market data.

Education in Focus: OECD Indicators. This report includes statistics on labor force participation, unemployment, and earnings by level of educational attainment.

Taxing Wages. This annual report presents estimates of net earnings, after income taxes, social security contributions, and cash benefits for manufacturing production workers by income level and family composition.

Standardized Unemployment Rates. Unemployment rates are computed for 25 countries according to standard ILO-OECD guidelines and published in *Labor Force Statistics.* Underlying unemployment and civilian labor force data are not published, and no other labor force data are adjusted for comparability.

European Union (EU)
Statistical Office of the European Communities (Eurostat)
http://www.europa.eu.int/comm/eurostat/

The European Union evolved from the initial establishment of the Council of Europe and the European Coal and Steel Community with six member countries after World War II. Today, it has 15 member states and is preparing for the accession of 13 eastern and southern European countries. The EU is a "supranational organization" to which member states delegate sovereignty to common institutions representing the interests of the EU as a whole on questions of joint interest.

Eurostat is responsible for collecting and publishing statistics to meet the needs of the Commission of the European Union and the European Central Bank. Data are collected by national statistical offices and transmitted to Eurostat. Concepts and data collection methods are sometimes dictated by the Commission; other times, determined by consensus in series of Expert Working Groups. Statistical series vary in their degree of comparability and countries' adherence to Eurostat guidelines. Statistics are published in a series of general and detailed publications— in collections called *News Releases, Statistics in Focus, Panorama of the European Union,* and *Detailed Tables*— and maintained on an extensive database (New Cronos). Many publications are available in electronic format.

Labor statistics collected include: harmonized labor force survey, wage structure survey, labor cost survey, employee earnings statistics, labor productivity indexes, and harmonized consumer price indexes. Publications of labor statistics in the *Detailed Tables* collection include the following: *Labor force survey results, Labour costs, Earnings in industry and services — hours of work in industry, Minimum wages— a comparative study,* and *Net earnings of employees in manufacturing industry in the European Union.*

United Nations (UN)
Statistics Division
http://www.un.org/Depts/unsd

The United Nations was established in 1945 with the purpose of maintaining international peace and security, cooperating in solving international economic, social, cultural, and humanitarian problems and promoting human rights and fundamental freedoms. Almost every country in the world is a member. The United Nations and its specialized agencies have several programs for the collection and publication of statistics. The following publications include labor statistics:

Statistical Yearbook. The *Yearbook* includes 85 tables covering population and social statistics, economic activity,

and international economic relations for more than 235 countries, areas, or territories. Data are official statistics of member countries, presented in a common framework, with notes concerning differences from international norms. The labor statistics included are employment by industry, unemployment, wages in manufacturing, and consumer price indexes, provided by the ILO.

Monthly Bulletin of Statistics. The *Bulletin* includes international economic indicators which are available monthly or quarterly, including employment, unemployment, wages, hours of work, and consumer price indexes provided by the ILO.

World Bank
Development Data Group
http://www.worldbank.org/data/

The World Bank is a lending institution whose aim is to help integrate developing and transition countries with the global economy, and to reduce poverty by promoting economic growth. It has 181 member countries.

World Development Indicators. This annual report includes 85 sets of development indicators covering social progress and quality of life, along with economic development, physical infrastructure, government policy and performance, and the condition of the environment. Indicators are based on statistics provided by the ILO, the United Nations Educational, Scientific, and Cultural Organization (UNESCO), World Health Organization (WHO), and the World Bank's Development Research Group. Time series are available on CD-ROM.

Labor market indicators include labor force structure, employment by economic activity, unemployment, wages, hours

and productivity. Related social indicators cover population dynamics, poverty and income or consumption distribution, education, and health. The report includes summary analysis and information about the data, along with the statistics.

International Monetary Fund (IMF)
Statistics Department
http://www.imf.org
http://dsbb.imf.org

The International Monetary Fund is an international organization of 183 member countries. It was established to promote international monetary cooperation, exchange stability, and orderly exchange agreements; to foster economic growth and high levels of employment; and to provide temporary financial assistance to countries to help ease balance of payments adjustments.

International Financial Statistics. Major financial and economic statistics are released in a monthly publication, a yearbook, and time series on CD-ROM. Labor statistics included are: labor force, employment, unemployment, and wages.

Dissemination Standards Bulletin Board. The *Bulletin Board* includes the following: information about economic and financial data series, concepts and definitions, coverage, data collection methods, their quality and timelines; information about data dissemination practices; information on data standards; and articles and other contributions related to data quality issues. It was established to guide countries in improving the quality of their economic, financial, and socio-demographic statistics. The *Bulletin Board* is posted on the IMF Web site.

U.S. labor market performance in international perspective

*From 1960 to 2000, U.S. unemployment rates improved
from relatively high to the lowest among the G7 countries;
Canada and the United States were leaders in job creation,
while Japan and Europe had much weaker employment gains*

Constance
Sorrentino
and
Joyanna Moy

For developed economies, monthly un-employment and employment changes are considered the two most informative labor market indicators, providing knowledge about the current performance of the labor market and the economy as a whole. International analyses often focus on these two key indicators as well, to compare the functioning of labor markets across countries. Researchers have attempted to explain the reasons for international differences and to glean lessons from the more "successful" countries that may be applied toward bringing down unemployment and stimulating job creation in the less successful ones. In fact, the first BLS international comparison of unemployment rates was initiated at the request of a 1961 Presidential Committee that was concerned about the apparently high U.S. unemployment rate compared with rates in Europe and Japan. The BLS program of comparative labor force statistics evolved from that initial study for the Committee,[1] and the data from that program permit a long-term international perspective on labor market outcomes.

Unemployment trends over the past 40 years clearly show divergent paths taken by the United States and Europe. From 1960 to 2000, the United States moved from the position of being a country with relatively high unemployment to a nation that attained the lowest jobless rate among the G7 major industrial countries (the United States, Canada, Japan, France, Germany, Italy, and the United Kingdom).[2] By contrast, European unemployment rates moved in the opposite direction, from low to high, with the crossover occurring in the mid-

1980s. While Europe and the United States were switching positions, Canada and Japan generally maintained their places in the international array: Canada's jobless rate was frequently the highest, and Japan's was almost always the lowest, during the 40-year period.

In contrast to unemployment statistics, relative employment trends were more consistent throughout the period. The United States and Canada generated the strongest job creation, while Japan and Europe had much weaker employment increases. The two North American countries' employment growth greatly surpassed their population growth, while Europe's and Japan's employment did not even keep pace with more slowly rising populations. Canada's job creation success contravened its relatively high unemployment rate over the four decades.[3] The United States had the best of both worlds: lower unemployment rates and high job creation.

This article examines U.S. trends and levels of unemployment, employment, and related statistics from 1960 to 2000, contrasting them with corresponding trends and levels from the other G7 countries. To facilitate comparisons, the European members of the G7 are often treated as a unit and referred to as "Europe (G4)" or simply "Europe."[4] When numerical growth rates and averages are given for Europe (G4), they are simple arithmetic averages of the respective figures for France, Germany, Italy, and the United Kingdom.

Most of the data presented are from the BLS program of international labor force comparisons,

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About the data

Most of the data presented in this article are from the BLS program of international labor force comparisons, in which the foreign data are adjusted to U.S. concepts.[1] In addition, comparative data published by the Organization for Economic Cooperation and Development (OECD) are used to supplement the BLS data in order to capture other important differences in labor market performance. The OECD data, however, do not cover the entire 40-year period covered in the article; generally, OECD data are limited to 1983 or 1984 onward. One tabulation in the article draws upon harmonized unemployment rates produced by the Statistical Office of the European Communities (Eurostat). These data are closely comparable to the unemployment rates in the BLS adjusted series.

BLS data

Both national data and BLS adjustment methods have changed over the years since 1960. Consequently, there are breaks in the historical continuity of series for most countries. Some breaks are inconsequential, while others represent a more significant discontinuity in the series that would seriously affect estimates of growth rates or averages over periods of time. In order to portray a more consistent long-term comparative picture, the Bureau evaluated the various breaks and decided that adjustments should be made to employment data for Germany and unemployment rates for Italy.

In the BLS comparative database, data for Germany refer to the former West Germany through 1990 and to Germany (unified) thereafter. Thus, there is a significant discontinuity between 1990 and 1991, when German employment increased by almost 10 million and unemployment jumped by about a percentage point with the inclusion of the people of the former East Germany. To estimate the employment trends and employment-to-population ratios in this article, the Bureau has calculated a hypothetical unified Germany employment series back to 1960.[2]

No adjustment is made, however, for the 1991 discontinuity in German unemployment rates. There was no concept of unemployment under the former East Germany's economic system; therefore, there is no basis upon which to link an unemployment series. Consequently, the reader should keep in mind that the upward movement of German and, hence, Europe's unemployment rates in the 1990s is partly due to the absorption of the unemployment that became measurable in the former East Germany after unification.[3]

For Italy, the statistics in the BLS comparative database contain three significant breaks in series for unemployment rates, due to revised questionnaires and definitions that materially affected the continuity of the series. All of these revisions resulted in higher unemployment estimates for Italy. For this article, the Bureau has estimated the effects of the breaks and eliminated them, on the basis of links available for 1986, 1991, and 1992. The result is a substantial increase in estimates

of Italian unemployment rates from 1960 to 1991 over those rates shown as "adjusted to U.S. concepts" in the published BLS database. The changes in the Italian questionnaires and definitions did not substantially affect the employment figures; therefore, the employment series has not been adjusted.

Another adjustment made for this article has to do with data on Japanese men's and women's unemployment rates adjusted to U.S. concepts. The BLS comparative database for Japan's unemployment rates by sex has not been updated for 1994 onward. Updates for 1994–2000 are available from a study by a Japanese economist published in the April *Review*.[4] The data from that article have been used to complete the series for Japanese unemployment rates by sex and will be added to the BLS comparative database in the next update.

OECD data

Data compiled by the OECD are used in this article to present information on youth unemployment, the duration of unemployment, employment-to-population ratios by age, and part-time and full-time employment. The OECD data are quite comparable to the corresponding BLS data, although some adjustments for comparability that are made by the Bureau are not made by the OECD. There are some important caveats, however, about the data on full-time and part-time employment, mainly with respect to Japan:

Data collected by the OECD on a standardized basis permit comparisons of trends and levels of full-time and part-time work across countries. The OECD definition of part-time employment covers persons usually working 30 or fewer hours per week in their main job. This criterion is different from the U.S. definition, which covers persons working fewer than 35 hours per week.

The most important caveat regarding data on full-time and part-time work is that the OECD was not able to obtain an adjusted series for Japan. Hence, Japan's data in table 8 are not comparable to those of the other countries, for two reasons: (1) the Japanese data are based on "actual hours worked" rather than "usual hours worked," and (2) part-time employment in Japan is defined as working fewer than 35 hours per week. Thus, the data for Japan are shown only for tracking the broad trend in that country and should not be used to compare levels with other countries.

Another caveat is that the U.S. data are for wage and salary workers only, while the data for the other countries cover all employment. This difference should not materially affect the comparisons, because paid workers account for more than 90 percent of total U.S. employment. Finally, the time-series data could not be adjusted to take account of the unification of Germany; for that reason, the growth rates in table 8 were calculated for the 1983–90 period for the former West Germany and for the 1991–2000 period for unified Germany.

Notes to this box

[1] The Bureau issues a semiannual compendium titled "Comparative Civilian Labor Force Statistics, Ten Countries." The latest edition, dated Mar. 25, 2002, can be accessed at the Internet site **http://www.bls.gov/fls/home.htm**. The compendium is also available in printed form upon request from the authors.

[2] The data for Germany were linked on the basis of 1991 ratios of employment in the former West Germany to employment in Germany (unified). Data were available on both bases that year. In 1991, employment in the former West Germany accounted for 77 percent of total employment in Germany (unified).

[3] Even excluding the former East Germany, German unemployment rates would

still show increases in the 1990s, but they would be about a percentage point lower than the figures shown for Germany in this article.

[4] See Toshihiko Yamagami, "Underutilization of labor resources in Japan and the United States," *Monthly Labor Review*, April 2002, pp. 25–43; on the Internet at **http://www.bls.gov/opub/mlr/2002/04/art3full.pdf**. For Japan, the Bureau has long maintained series for men's and women's unemployment rates adjusted for differences with U.S. concepts such that the differences tend to cancel out in the overall unemployment rate. While these further adjustments are not made to the BLS series for the overall Japanese unemployment rate, they do have a significant impact on the jobless rates for Japanese men and women, lowering the men's rate and raising the women's rate.

but several series are from the Organization for Economic Cooperation and Development (OECD), and one is from the Statistical Office of the European Communities (Eurostat). The box on page 16 summarizes additional adjustments made in the BLS database expressly for this article and presents some caveats about comparability of the OECD data on full-time and part-time work.

The analysis begins with an investigation of overall comparative labor market performance, focusing on unemployment and employment trends over the past 40 years. This sets the stage for a deeper investigation of the comparative unemployment experiences of men, women, and youths. Data on the duration of unemployment illustrate a major difference in the nature of joblessness in the United States, compared with other countries. The article then turns to an analysis of employment indicators, including the employment-to-population ratio by age and sex, sectoral employment trends, and trends in full-time and part-time jobs. Some other European countries have diverged from the path set by the G4, and this divergence is captured in a look at selected trends in other European Union countries.

Numerous studies over the years, by both the Bureau and other researchers, have attempted to explain the international labor market differences described herein. A final section summarizes the major findings of some of this literature.

Historical overview

Overall trends in unemployment and employment are described for 1960–2000, including averages for three subperiods: 1960–73, 1973–90, and 1990–2000. Except for 1960, the first year for which most of the BLS data are available, these periods are broken at or near a business cycle peak for most countries and correspond to those chosen for the analysis of manufacturing productivity in another article in this issue of the *Review*.[5] A U.S. business cycle peak occurred in April 1960, with the corresponding trough in February 1961. In 1973, the first "oil crisis" plunged the industrial economies into recession in 1974–75, when unemployment rose sharply, and 1990 preceded substantial increases in unemployment in six of the seven countries during 1991–92. Japan's unemployment rate increases came a little later, in 1993 and from then onward. With one exception, employment was increasing and unemployment rates were declining in all of the base years chosen for the analysis. The exception was Japan in 2000, when employment moved downward slightly and the unemployment rate remained stable.

Unemployment.   Despite the disrupting influence of worldwide cyclical movements and the particular economic ills that plagued individual countries, the relative positions of the seven industrial countries showed little change over the decades of the sixties and seventies. Then the comparative picture began to change.

The first panel of chart 1 depicts the trends in unemployment rates for the United States, Canada, Japan, and Europe (the G4 nations) for 1960 through 2000. At the beginning of the period and throughout the 1960s, unemployment was comparatively high in both the United States and Canada and very low in Japan and Europe.[6]

Although, over the 40-year period from 1960 to 2000, the U.S. unemployment rate reached a low of 3.5 percent in 1969, the figure was still significantly higher than that of Europe and, especially, that of Japan the same year. In 1969, Japan's rate also had attained a 40-year low (1.1 percent), while Germany's rate (0.6 percent) was indicative of a severe labor shortage. (Still, Germany's rate had been lower by half earlier in the decade, when that nation had to import millions of *Gastarbeiter*—"guest workers"—to keep the wheels of industry turning.[7]) Italy's unemployment rate was above the rate for the United States, while the French and British rates, although not as low as Germany's, were under the record low U.S. rate.

Prior to the first "oil shock" in 1973, unemployment in the United States had already risen in 1971–72 over the 1970 level, while rates remained fairly low in Japan and Europe. In 1975, joblessness surged in all the G7 countries, with the U.S. rate of 8.5 percent the highest in the group. The U.S. rate proceeded to move downward sharply during the rest of the 1970s, while jobless rates generally rose even further in the other G7 countries.

The second "oil shock," in 1979, and the recession that followed in the early 1980s again resulted in substantial increases in the unemployment rate in all of the countries examined. This time, however, Canada's rate moved higher than the U.S. rate. As the U.S. rate subsequently moved downward in the 1980s and European rates continued to rise, the U.S. rate fell below the European (G4) average for the first time. Even when European rates moved slowly downward in the latter 1980s, the U.S. rate continued to be below the European rate, a situation that has remained through the latest year studied.

In the early 1990s, recessions resulted in rising unemployment in all of the countries examined, except for Japan. Rates subsequently moved downward in the United States, Canada, and Europe, but the European decline was slower. By 2000, the average unemployment rate for Europe was the highest among the G7 groups, and the U.S. rate was the lowest. Japan's rate began to rise significantly in 1993, and by the end of the period, it had surpassed the U.S. rate for the first time in the 40-year period studied.

Table 1 shows the average unemployment rate for the entire period for each of the seven countries studied and for the three subperiods. On average, for the entire 1960–2000 period, Japan maintained the lowest jobless rates, 2.2 percent. The U.S. average was nearly 3 times as high. Europe's (G4) average was

Chart 1. Unemployment rates and employment trends in G7 countries, 1960–2000

Percent   Percent

Unemployment rates in G7 countries, 1960–2000
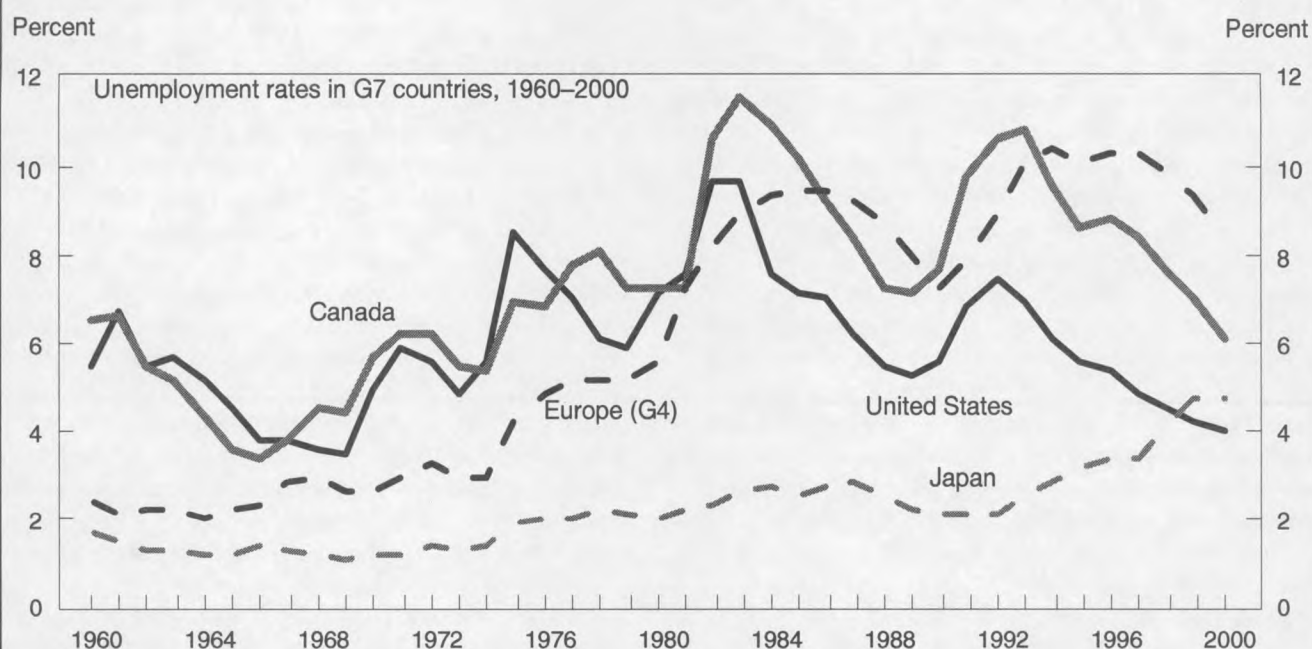
NOTE: Trend line for Europe includes data for the former West Germany through 1990; thereafter, the data refer to Germany (unified).

SOURCE: Bureau of Labor Statistics.

Rate   Rate

Civilian employment growth in G7 countries, 1960–2000
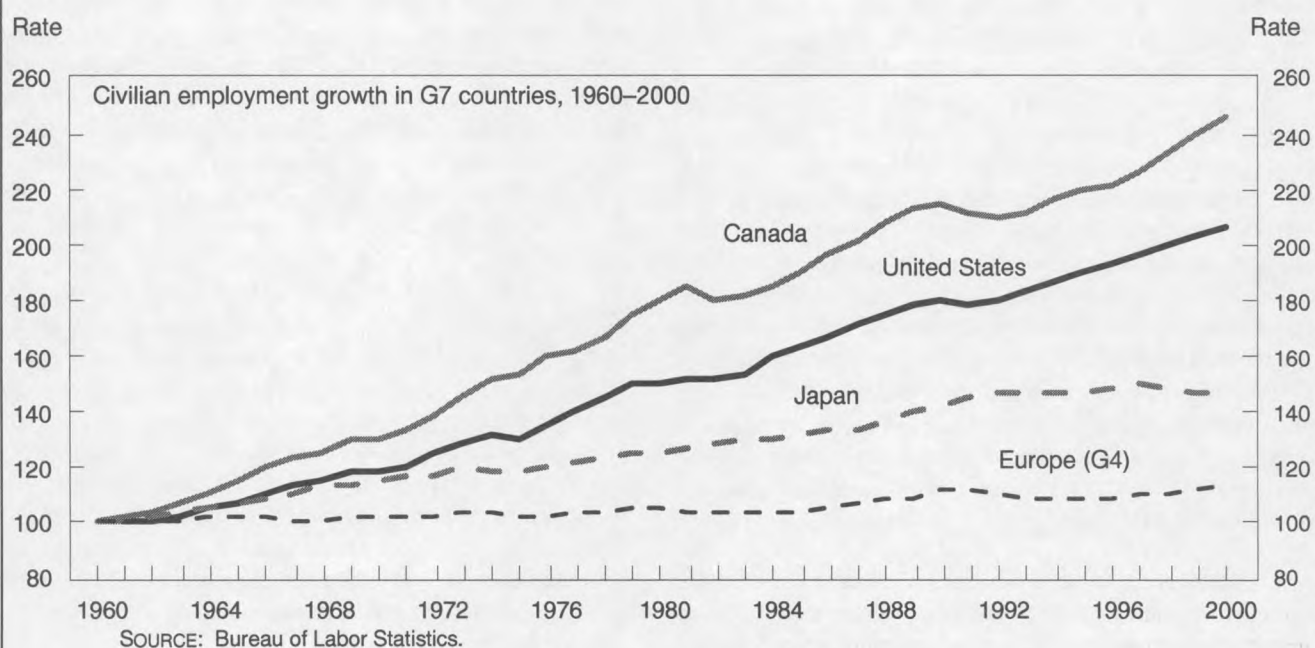
SOURCE: Bureau of Labor Statistics.

Table 1. Average unemployment rates in G7 countries, selected periods, 1960–2000

[In percent]

Country	1960–2000	1960–73	1973–90	1990–2000
United States	6.0	4.9	6.9	5.6
Canada	7.3	5.1	8.1	8.6
Japan	2.2	1.3	2.2	3.2
Europe (G4):	6.1	2.6	6.8	9.4
France	6.6	2.0	7.4	11.1
Germany[1]	4.2	.7	4.6	7.9
Italy[2]	7.3	4.7	7.2	10.5
United Kingdom	6.4	2.9	7.9	8.0

[1] Former West Germany through 1990; Germany (unified) thereafter.
[2] Adjusted for breaks in historical continuity of the series.

SOURCE: *Comparative Civilian Labor Force Statistics, Ten Countries, 1959–2001* (Bureau of Labor Statistics, Mar. 25, 2002); on the Internet at **http://www.bls.gov/fls/home.htm**.

slightly below the U.S. figure, while Canada had the highest average unemployment rate over the whole period, 7.3 percent.

The period 1960–73 was the time frame of lowest average unemployment rates for all G7 countries during the 40 years examined. In 1973–90, unemployment rose, on average, in all of the countries, with the highest relative increases occurring in Europe, where the average almost tripled compared with the previous period's figure. During the 1990–2000 period, the United States had the distinction of being the only G7 country in which the average unemployment rate was lower than it was in 1973–90. The increases in unemployment were greatest in the European countries (with the exception of the United Kingdom, where the rate was virtually unchanged) and moderate in Canada. Japan's average, although still the lowest of all the countries, was much higher than it was in the 1973–90 period.

Employment. The second panel of chart 1 portrays employment trends over the 40-year period studied. Overall, the U.S. job creation rate of 1.8 percent per year was surpassed only by Canada's, which was half a percentage point greater. By contrast, Japan and Europe had rather flat employment performance. Unlike the trend lines for Japan and Europe, recessionary downturns in employment are clearly evident in the charted lines for the United States and Canada, with the downturns or pauses always followed by a resumption of strong employment growth.

The United States maintained its relatively high employment growth rate during both 1960–73 and 1973–90, while the pace tapered off in Canada and Japan in the latter period. (See table 2.) Europe's very low rate of employment growth inched upward in 1973–90. By the 1990s, annual rates of change in employment turned downward in all countries except France. Employment growth was virtually nil in Germany, and employment declined slightly in Italy. Employment increases in France and the United Kingdom outpaced the low European (G4) average.

Although lower than the 2-percent growth rate of the previous period, the U.S. annual employment growth rate of 1.3 percent in 1990–2000 was 6 times the growth rate of Europe (G4), 4 times that of Japan, and almost the same as that of the perennial employment growth leader, Canada.

The huge comparative difference between the United States and Europe, a wider gap than in 1973–90, resulted in references to "the great American job machine" and the "U.S. Employment Miracle."[8] The U.S. performance became the envy of most other industrial countries, far different from the sentiments of the early 1960s, when the United States looked to European countries as exemplars of effective labor markets.

The foregoing broad picture of historical unemployment and employment trends sets the stage for a deeper investigation of (1) unemployment and employment for major demographic groups, (2) the duration of unemployment, and (3) the sectors and types of jobs for which changes were occurring. The investigation begins with unemployment indicators.

Additional unemployment indicators

Chart 2 reveals differences across countries in the unemployment experience of men compared with women and youths compared with adults. In addition, the chart highlights large contrasts in the duration of unemployment. The BLS database is supplemented by statistics from the OECD on youth and adult unemployment rates and on the duration of unemployment.

Men and women. Both North American countries moved toward, and then achieved, equality in unemployment rates for men and women. Japan and Europe appear to be moving in that direction also, but have not yet achieved equality. (See first panel of chart 2.)

In the United States, men had significantly lower unemployment rates than women every year from 1960 to 1981.

But men's rates began increasing relative to those of women in the 1970s and moved higher than women's during the 1980s recession. Subsequently, the rates equalized for some years, and then men's rates again rose higher than women's when recession occurred in the early 1990s. Later in the 1990s, women's and men's jobless rates again equalized. Canada had back-and-forth shifts in the relationship of men's to women's unemployment, with men having higher rates in the early 1960s and again in the 1990s, after some periods of equalization in the intervening years. By contrast, Japanese and European men had substantially lower jobless rates than women had throughout the 40 years studied.

In Europe, the male-female gap in unemployment rates remained remarkably stable over the 40 years, while Japan achieved some narrowing of the sex differential in 1973–90 and a further narrowing in the 1990s. (See table 3.) The United Kingdom had a different profile from the other European (G4) countries: in all periods, British women had notably lower unemployment rates than men, and the differential widened in the 1990s.

Youths and adults. In most industrial countries, unemployment rates for young people historically have been higher than those for their elders. Youth unemployment rates are, of course, affected by the overall job situation in each country. Therefore, ratios of youth (those under 25 years) to adult (25 to 54 years) unemployment rates are compared in table 4, with averages for two periods plotted in the second panel of chart 2, based on OECD data for 1984–2000.[9] (OECD data for earlier years were not available for all the G7 countries.) Such ratios may be affected by the general level of unemployment to some extent, but they highlight the relative problems of youths in the labor market.

The ratios shown in the chart are average ratios for the 1984–90 and 1990–2000 periods. There was little change over the two periods, with the differentials between youths and adults rising slightly in the United States and Canada, declining somewhat in Europe (G4), and holding about steady in Japan. Europe's decline was due mainly to a sharp decrease in the youth-adult ratio in Italy.

In the United States, young persons are 2 to almost 3 times as likely as adults to be unemployed. This differential was about the same as the overall averages for Europe and Japan for 1984–2000. Canada's youths experienced a much lower gap in unemployment rates with adults. Within Europe, there were sharp contrasts: Italian youths were 4 to 5 times as likely to be unemployed as their adult counterparts, while German youths had jobless rates about the same as adults throughout the period. (See table 4.)

Duration of unemployment. Almost half of Europe's unemployed remain jobless for a year or longer, while less than 10 percent fall into that category in the United States. (See bottom panel of chart 2, based on OECD data.) In 1983, the United States, Canada, and Japan had about the same proportion of long-duration unemployment, while Europe's was far higher. During the 1980s, the proportion declined somewhat in the United States and Canada, rose in Japan, and remained very high in Europe. All countries except Japan showed a rising trend in the early 1990s. Japan's long-duration unemployment worsened in the last half of the decade, while the other G7 countries showed some small improvement.

The data on duration of unemployment reveal an important difference in the nature of unemployment in the United States compared with Europe. The proportion of long-term unemployment in Europe remains persistently high even during and after recoveries. In the United States, it is relatively low even during downturns in the economy. Thus, the burden of unemployment tends to fall on a smaller proportion of the

Table 2. Employment growth rates in G7 countries, selected periods, 1960–2000

[Average annual rate of change]

Country	1960–2000	1960–73	1973–90	1990–2000
United States	1.8	2.0	2.0	1.3
Canada	2.3	2.9	2.3	1.4
Japan	1.0	1.4	1.0	.3
Europe (G4):	.3	.3	.5	.3
France	.6	1.0	.3	.6
Germany[1]	.2	.3	.3	.1
Italy	.1	−.5	.7	−.1
United Kingdom	.4	.3	.5	.4

[1] Employment adjusted to Germany (unified) throughout the period.

SOURCE: *Comparative Civilian Labor Force Statistics, Ten Countries, 1959–* *2001* (Bureau of Labor Statistics, Mar. 25, 2002); on the Internet at http://www.bls.gov/fls/home.htm.

Chart 2. Unemployment indicators by sex, age, and duration in G7 countries

Ratio   Ratio

Ratios of male to female unemployment rates, 1960–2000

Canada

United States

Japan

Europe (G4)

1960 1964 1968 1972 1976 1980 1984 1988 1992 1996 2000
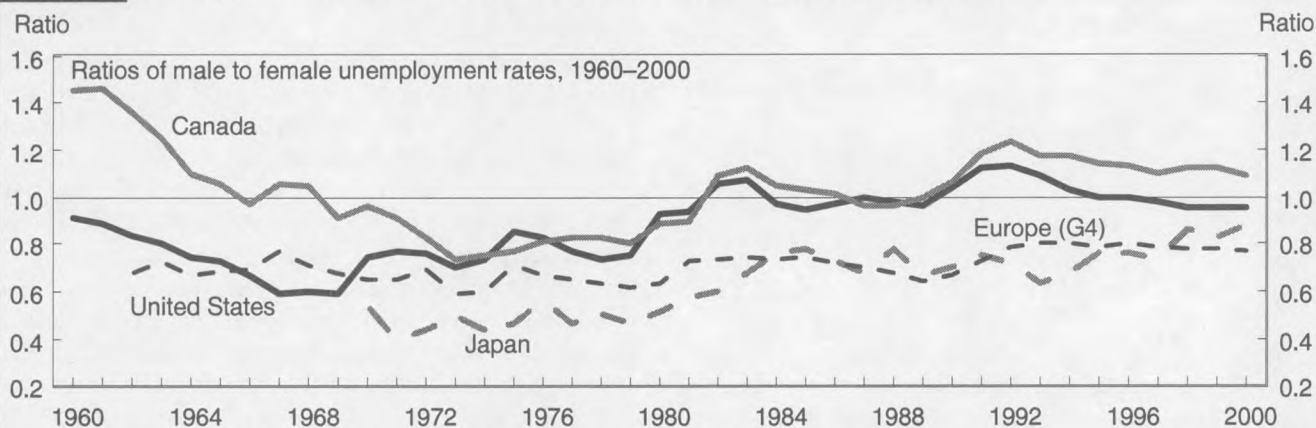
NOTE: Data for Japan are from 1970 to 2000; data for Europe (G4) are from 1962 to 2000.

Percent   Percent

Average ratios of youth to adult unemployment rates, 1984–2000

☐ 1984–90
■ 1990–2000

United States   Canada   Japan   Europe (G4)
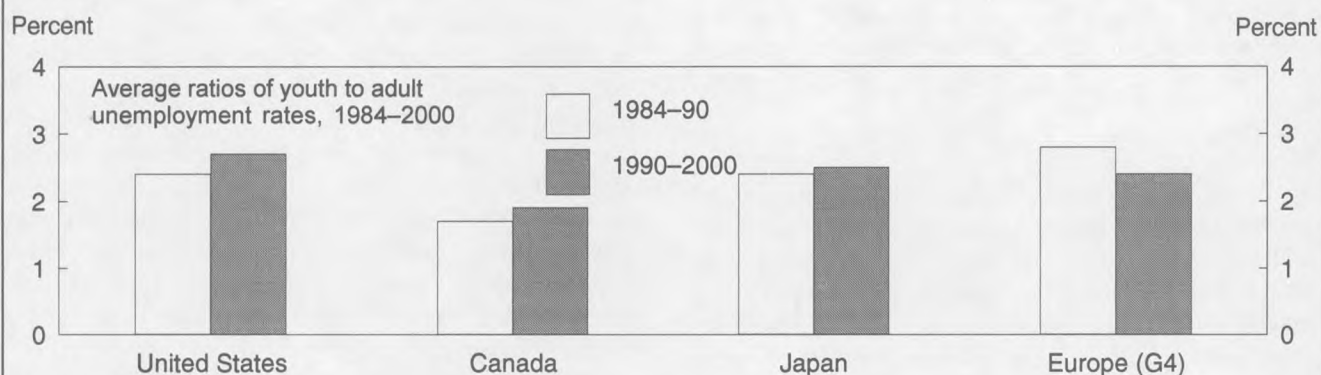
NOTE: Youths are under 25 years; adults are 25 to 54 years.
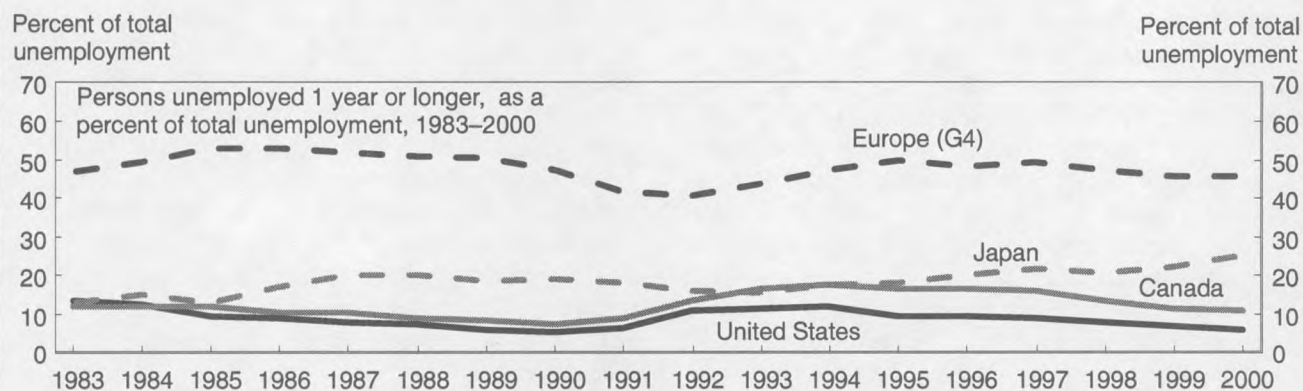
Percent of total   Percent of total
unemployment   unemployment

Persons unemployed 1 year or longer, as a percent of total unemployment, 1983–2000

Europe (G4)

Japan

Canada

United States

1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000

NOTE: Trend line for Europe (G4) includes data for the former West Germany through 1990; thereafter, the data refer to Germany (unified).

SOURCE: Top panel, Bureau of Labor Statistics; middle and bottom panels, Organization for Economic Cooperation and Development, Labor Force Statistics, 1980–2000.

Table 3.	Annual average ratios of men's to women's unemployment rates in G7 countries, selected periods, 1960–2000			
Country	1960–2000	1960–73	1973–90	1990–2000
United States	0.9	0.8	0.9	1.0
Canada	1.0	1.1	.9	1.1
Japan[1]	.6	.5	.6	.8
Europe (G4):	.8	.8	.7	.9
France	.6	.4	.6	.7
Germany[2]	.8	.8	.7	.8
Italy	.5	.6	.4	.5
United Kingdom	1.2	1.2	1.1	1.4

[1] Data begin with 1970.
[2] Former West Germany through 1990; Germany (unified) thereafter.

SOURCE: *Comparative Civilian Labor Force Statistics, Ten Countries, 1959–2001* (Bureau of Labor Statistics, Mar. 25, 2002); on the Internet at **http://www.bls.gov/fls/home.htm**.

population in Europe, while in the United States and Canada, a greater percentage of the population experiences a spell of unemployment over the course of a year.

Additional employment indicators

This section takes a more indepth look at employment by examining employment-to-population ratios overall and by sex and age. In addition, investigations of trends in employment in agriculture and in goods-producing and service-producing industries and analyses of trends in part-time and full-time jobs reveal further important contrasts between the United States and other countries.

Employment ratios. The employment-to-population ratio (hereinafter, simply the employment ratio) indicates how a country's employment growth compares with the growth in its working-age population. Employment growth surpassed working-age population growth in the United States and Canada, and employment ratios moved upward. (See chart 3.) Meanwhile, employment did not keep up with working-age population growth in Japan and Europe, and those countries' ratios generally moved downward. Cyclical fluctuations were greater in employment ratio trends for the United States and Canada than for Japan and Europe.

At the beginning of the period, employment ratios were lowest in Canada and the United States, but by the end of the period, the United States had the highest ratio, followed by Canada. Japan began the period with the highest employment ratio by far, but it fell below the ratios of the two North American countries by the mid-1980s.

Employment ratios in Europe (G4) declined over the past 40 years and are now far below those of the other G7 countries. Within the G4 nations, the drop was steepest in Italy. (See table

5.) The United Kingdom's employment ratio was much closer to that of the two North American countries than to Europe's average.

Employment ratios were rising for women and falling for men over the long term. (See chart 4 and table 5.) Again, there were greater fluctuations in the U.S. and Canadian ratios and milder ones in the Japanese and European ratios.

The employment ratios for men were highest in Europe and Japan in the 1960s and lowest in Canada and the United States. By 2000, employment ratios for Japanese and U.S. men were about equal, while the rate for European men dropped to the lowest among men in any of the G7 groups. In the United States and Canada, employment ratios for men rose slowly during most of the expansionary years of the 1980s and 1990s, counter to the historical downward trend, but the ratio for Japanese and European men continued downward.

Employment ratios for women increased in every G7 group except Japan, but the European (G4) increase was due mainly to a large gain by British working women. Employment ratios showed little increase in the other G4 members, and in Italy they fell until around the mid-1980s, before rising again to reach their 1960 level by 2000. For Japanese women, the trend was one of decline until the late 1970s and a leveling off thereafter.

In 1960, U.S. women had a much lower employment ratio than Japanese women and a slightly lower ratio than European women. By 2000, U.S. women had the highest employment ratio of women in any of the G7 countries, with Canadian women close behind. Canadian women recorded the strongest increases, experiencing a near doubling in their employment ratio from 1960 to 2000.

Comparative employment ratios are greatly influenced by the varying ratios for certain age groups. In particular, there is little variation across countries in employment ratios for workers in their prime working ages (25 to 54 years), but large variations in employment ratios for youths (under 25 years) and older workers (55 to 64 years). (See chart 5.) The basic similarities and differences among the G7 countries appearing in chart 5 have held since at least the early 1980s. (See table 6.)

The United States had the highest proportion of working youths, a much higher rate than in Japan and Europe and slightly higher than Canada's rate. At the other end of the age spectrum, Japan had the highest employment ratio for older workers, and the United States was next in line. The U.S. ratio was 20 percentage points higher than the older worker ratio for Europe and about 10 percentage points higher than the rate for Canada. Employment ratios for the younger and older U.S. populations grew from 1983 to 2000, while they declined or held steady elsewhere, except for Canadian youths, whose employment rates also moved upward.

In the United States and Canada, persons in the prime working ages had substantial increases in employment ratios from 1983 to 2000, compared with their counterparts in Japan and Europe.

The small increases for prime-age workers, combined with the declines in employment rates for younger or older workers, explain the long-term downward trend in employment ratios depicted in chart 3 for Japan and Europe. By contrast, the United States and Canada saw increasing employment rates in all three of the age groupings, although Canada's older workers had only a slight increase.

Sectoral employment. Over the past 40 years, employment trends in the three major economic sectors—agriculture, goods-producing industries and service-producing industries—were quite different both within and across countries. (See chart 6 and table 7.) The superior employment performances of the United States and Canada stemmed mainly from their much larger gains in service-sector employment, lower losses in agriculture, and maintenance of some growth in the goods-producing sector.

Employment in agriculture fell in all of the countries examined, but the losses were smaller in the two North American countries. Japan and Europe (particularly France, Germany, and Italy) experienced large percentage declines in agricultural employment. These countries began the period with substantially larger agricultural sectors than the others, which already had suffered big losses from the agriculture sector earlier in the 20th century.

In the goods-producing industries, employment increases occurred in the United States, Japan, and Canada. In Europe, employment in this sector either declined (in France, Germany, and the United Kingdom) or held steady (in Italy).

The service-producing industries were the engine of job growth throughout the G7 countries. Employment growth in the service-producing sector was stronger than it was in the goods-producing sector in all seven countries, with the strongest showing in the United States and Canada.

In 2000, the service-producing sector accounted for between three-fifths and three-quarters of total employment in the countries studied. Employment in goods-producing industries made up one-fifth to one-third of total employment. In contrast, employment in agriculture accounted for 5 percent or less of total employment in all of the countries studied.[10]

Full-time and part-time employment. This section is based upon an OECD standardized series on full-time and part-time employment. (See box on page 16 for information about this series and some caveats about the comparability of the Japanese data in particular.)

Most U.S. employment growth since 1983 has been in full-time jobs. (See table 8.) The United States was the only G7 country with a declining proportion of part-time employment during 1983–2000. In Europe, employment growth has been weak

Year	United States	Canada	Japan	Europe (G4)	France	Germany[1]	Italy	United Kingdom
1984	2.3	1.8	2.3	3.2	3.7	1.7	5.4	2.1
1985	2.3	1.8	2.3	3.3	3.4	1.5	6.4	1.9
1986	2.3	1.8	2.4	3.0	3.0	1.3	5.6	1.9
1987	2.4	1.7	2.3	2.7	2.6	1.2	5.2	1.7
1988	2.4	1.7	2.5	2.6	2.6	1.2	4.7	1.7
1989	2.6	1.6	2.5	2.3	2.3	1.0	4.4	1.6
1990	2.4	1.7	2.7	2.4	2.4	1.0	4.3	1.7
1991	2.4	1.7	2.8	2.4	2.5	1.0	4.3	1.9
1992	2.2	1.7	2.6	2.3	2.3	.9	4.3	1.8
1993	2.3	1.7	2.6	2.5	2.5	1.0	4.3	2.0
1994	2.5	1.7	2.3	2.4	2.5	1.0	3.9	2.0
1995	2.7	1.7	2.3	2.4	2.5	1.1	3.8	2.1
1996	2.8	1.8	2.5	2.4	2.4	1.2	3.7	2.1
1997	2.9	2.1	2.4	2.4	2.5	1.2	3.7	2.3
1998	3.0	2.1	2.3	2.4	2.4	1.1	3.5	2.5
1999	3.1	2.2	2.3	2.4	2.5	1.0	3.5	2.5
2000	3.0	2.2	2.2	2.5	2.6	1.1	3.6	2.7
Averages:								
1984–2000	2.6	1.8	2.4	2.5	2.6	1.1	4.4	2.0
1984–90	2.4	1.7	2.4	2.8	2.9	1.3	5.1	1.8
1990–2000	2.7	1.9	2.5	2.4	2.5	1.1	3.9	2.1

[1] Former West Germany through 1990; Germany (unified) thereafter.

NOTE: Youth are defined as persons under 25 years; adults are persons aged 25 to 54 years.

SOURCE: *Labor Force Statistics, 1980–2000, Part III* (Paris, Organization for Economic Cooperation and Development, 2001).

Chart 3. Employment-to-population ratios in G7 countries, 1960–2000
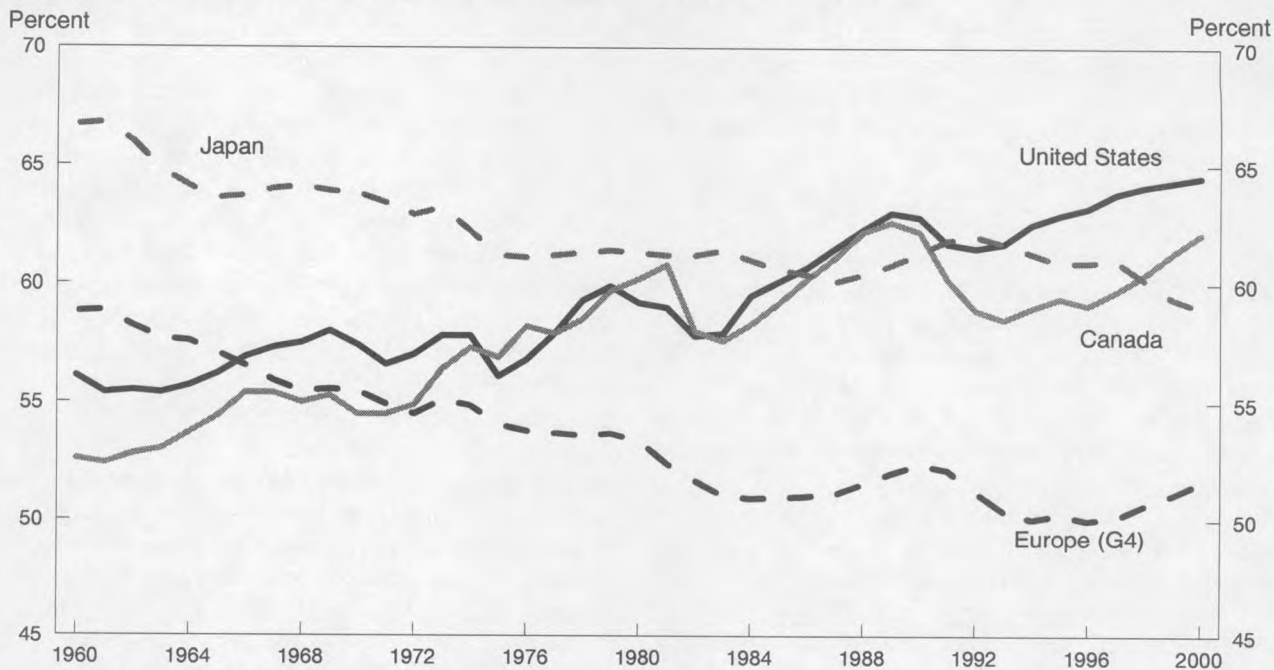
SOURCE: Bureau of Labor Statistics.

Chart 4. Employment-to-population ratios by sex in G7 countries, 1960–2000
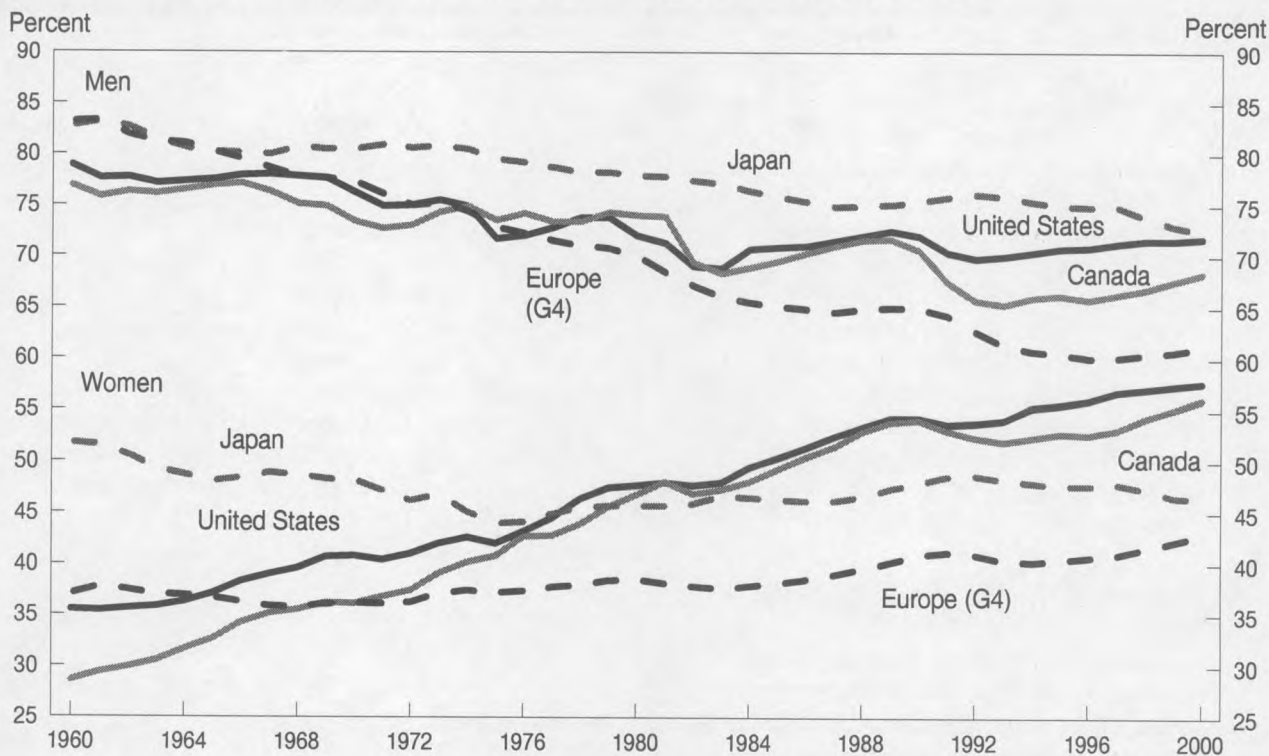
SOURCE: Bureau of Labor Statistics.

Table 5. Employment-to-population ratios in G7 countries, 1960, 1973, 1990, 2000

[In percent]

Year and sex	United States	Canada	Japan	Europe (G4)	France	Germany[1]	Italy	United Kingdom
Both sexes:								
1960	56.1	52.6	66.7	58.8	58.6	62.0	54.0	60.6
1973	57.8	56.4	63.2	55.1	55.8	58.5	45.8	60.3
1990	62.8	62.2	61.3	52.4	50.9	55.1	43.9	59.6
2000	64.5	62.1	59.0	51.7	51.1	52.8	42.9	59.8
Men:								
1960	78.9	76.9	82.8	83.2	—	85.1	79.5	85.0
1973	75.5	74.3	80.8	75.2	74.2	78.3	69.3	79.1
1990	72.0	70.6	75.4	65.0	61.3	68.2	60.0	70.3
2000	71.8	68.3	72.5	61.2	59.0	61.7	56.5	67.5
Women:								
1960	35.5	28.6	51.8	37.5	—	42.6	31.0	38.9
1973	42.0	39.1	46.8	37.1	39.2	41.2	24.5	43.4
1990	54.3	54.1	48.0	40.9	41.5	43.1	29.2	49.8
2000	57.7	56.1	46.4	42.9	43.9	44.6	30.5	52.6

[1] Employment ratios are adjusted to Germany (unified) throughout the period.

NOTE: Dash indicates data not available.

SOURCE: *Labor Force Statistics, 1980–2000, Part III* (Paris, Organization for Economic Cooperation and Development, 2001).

in general, but, in addition, the increases that did occur were mainly in part-time employment. This appears also to be the case in Japan.

In 2000, part-time employment constituted 12 percent to 13 percent of total employment in the United States and Italy, but almost twice that proportion in the United Kingdom. Japan's proportion of part-time work appears to have been very high, but the Japanese data are not closely comparable to those for the other countries, being overstated to an unknown degree.

Chart 7 tracks the ratio of full-time to part-time employment from 1983 to 2000. (Note that the jump in the trend line for Europe (G4) in 1991 was due to the absorption of workers from the former East Germany, who were predominantly full-time workers in the Soviet system.) Europe began the period with the highest ratio of full-time to part-time workers, but the trend was sharply downward thereafter. The United States began the period with a ratio considerably below Europe's, but ended with the highest ratio: full-time employment was 7 times as high as part-time employment, while in Europe it was 5 times as high. In Canada, the ratio was somewhat lower. Japan's trend (not shown in the chart) also was sharply downward.

Europe beyond the G4 countries

Several European countries that are not members of the G4 have had labor market experiences somewhat different from those of France, Germany, Italy, and the United Kingdom. Table 9 shows unemployment rates for other countries in the European Union.[11] The data for all countries except Sweden are from harmonized unemployment rates produced by Eurostat. The data for Sweden

are from the BLS comparisons program. Unemployment rates for the entire period back to 1960 are available only for Sweden; therefore, the table focuses on the more recent trends.

Sweden had an extraordinarily low unemployment rate in 1990, and in the years back to 1960 the rate never rose above 3.5 percent on an annual basis. However, the Swedish jobless rate surged to 9.3 percent in 1993 and then continued to climb to about 10 percent in 1997 before abating. Over the period 1990–2000, Sweden's average unemployment rate of 7.3 percent was about 2 percentage points below the G4 average. Several of the other non-G4 European countries had lower unemployment rates than the G4 average for the 1990s, with Austria and the Netherlands well below even the U.S. average rate of 5.6 percent for the period. By contrast, Spain, with rates above 20 percent in some years of the 1990s, greatly surpassed the European (G4) average.

The Netherlands also provides an exception to the slow employment growth of Europe (G4). Dutch employment grew at about the same pace as that in the United States from 1973 to 2000,[12] but the nature of Dutch job growth was quite different from U.S. job growth: Dutch employment gains were virtually all in part-time positions. In 1983, part-time jobs made up only 7 percent of all employment in the Netherlands; by 2000, the proportion had rocketed to one-third of all Dutch employment, the highest share among the European Union countries.

Perspectives on differences

The divergent experiences of labor markets in the United States, Canada, Europe, and Japan have spawned a host of

Chart 5. Employment-to-population ratios by age in G7 countries, 2000

Percent
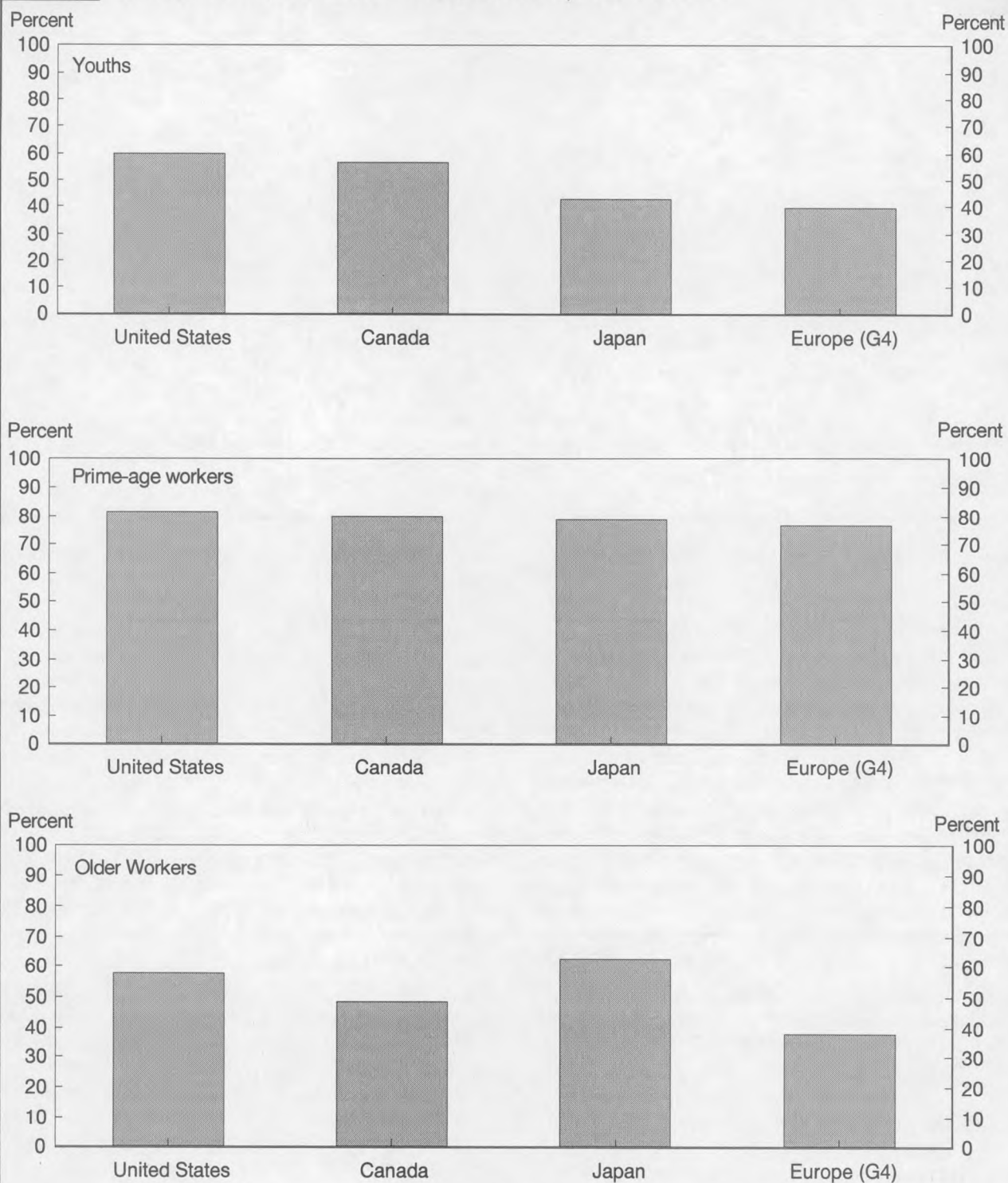
NOTE: Youths are under 25 years, prime-age workers are 25 to 54 years, and older workers are 55 to 64 years.

SOURCE: *Employment Outlook* (Paris, Organization for Economic Cooperation and Development, June 2001), Statistical Annex, Table C.

Table 6. Employment-to-population ratios by age and sex in G7 countries, 1983, 1990, and 2000

[In percent]

Country and age group	Both sexes			Men			Women		
	1983	1990	2000	1983	1990	2000	1983	1990	2000
United States:									
16–24	55.6	59.8	59.8	59.2	63.5	62.0	52.2	56.1	57.6
25–54	73.7	79.7	81.5	86.1	89.1	89.0	62.0	70.6	74.3
55–64	51.4	54.0	57.7	65.2	65.2	65.6	39.4	44.0	50.5
Canada:									
15–24	53.6	61.1	56.3	54.3	62.3	56.7	52.9	59.9	55.8
25–54	71.9	78.0	79.9	84.6	86.4	85.9	59.1	69.7	74.0
55–64	47.9	46.3	48.4	66.4	60.3	57.7	30.9	33.0	39.3
Japan:									
15–24	42.2	42.2	42.7	41.9	41.4	42.5	42.5	43.0	43.0
25–54	76.6	79.6	78.6	95.2	96.2	93.5	58.1	62.9	63.6
55–64	61.3	62.9	62.7	95.2	80.4	78.4	45.1	46.5	47.8
Europe (G4):									
15–24	45.9	47.3	39.8	50.8	51.3	43.3	40.9	43.2	36.3
25–54	72.2	74.5	76.7	90.0	89.1	87.1	54.4	59.9	66.1
55–64	39.9	38.4	37.7	56.4	52.1	46.7	25.6	25.7	29.0
France:									
15–24	36.7	29.5	23.3	42.8	33.6	26.7	30.5	25.2	20.0
25–54	76.9	77.4	78.3	91.9	89.8	87.0	61.9	65.1	69.6
55–64	39.9	35.6	34.2	50.4	43.0	38.4	30.4	28.8	30.2
Germany:[1]									
15–24	51.6	56.4	48.4	54.6	58.7	52.5	48.4	54.0	44.2
25–54	71.4	73.6	80.2	88.4	86.9	89.4	53.7	59.6	70.8
55–64	38.1	36.8	38.6	57.4	52.0	48.2	24.0	22.4	29.0
Italy:									
15–24	34.4	33.3	26.1	40.9	38.8	30.2	28.1	27.8	22.0
25–54	67.0	68.0	67.7	93.2	90.2	84.6	41.8	46.2	50.7
55–64	34.1	32.0	27.3	55.3	50.9	40.3	14.6	14.7	15.2
United Kingdom:									
16–24	60.7	70.1	61.5	64.8	74.2	63.9	56.5	65.9	58.9
25–54	73.3	79.0	80.4	86.4	89.5	87.5	60.2	68.6	73.1
55–64	47.5	49.2	50.5	62.6	62.4	59.8	33.4	36.7	41.4

[1] Former West Germany in 1983 and 1990; Germany (unified) in 2000.

SOURCE: *Employment Outlook* (Paris, Organization for Economic Cooperation and Development, June 2001 and July 1997), Statistical Annex, Table C.

studies, many of which have tried to determine the underlying causes of these differences. Earlier studies sought to explain the relatively high U.S. unemployment rates, while studies after the mid-1980s attempted to explain the success of the U.S. labor market compared with that in Europe, in terms of both unemployment rates and employment growth. Other research delved into reasons underlying differences in youth unemployment rates, labor force participation rates, and sectoral employment trends. A few studies looked beyond unemployment to international comparisons of broader measures of underutilization, and bilateral (that is, two-country) studies investigated the U.S.-Japan and the U.S.-Canadian unemployment gaps. Research on "labor market flexibility"

examined the impact of various institutions and legislation on comparative employment and unemployment. This section begins with summaries of some BLS studies, almost all of them published in the *Review*, and concludes with a brief discussion of selected research by other individuals and organizations.

Myers and Chandler. In 1961, the President's Committee to Appraise Employment and Unemployment Statistics asked the Bureau to prepare a study of definitional and other reasons for the high unemployment rate in the United States, compared with rates in other industrialized countries. In response, Robert J. Myers and John H. Chandler presented one of the first analyses of international unemployment differences to the Committee,

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Chart 6. **Annual average employment growth rates by sector in G7 countries, 1960–2000**

Percent change

Percent change
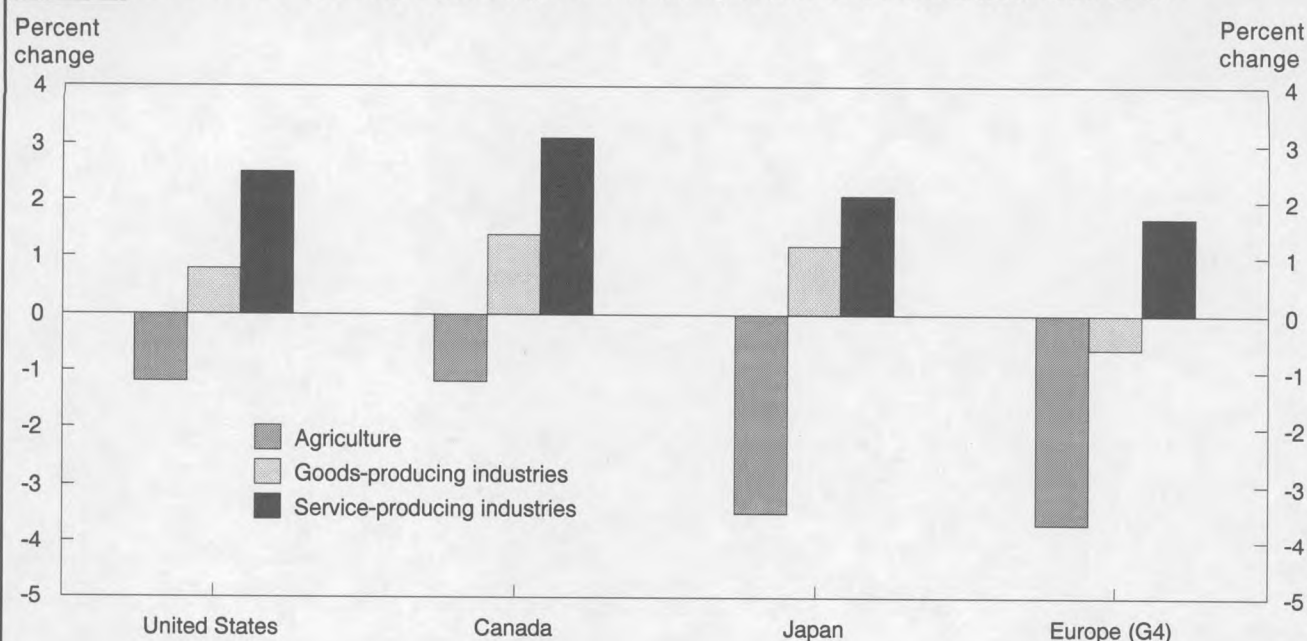
SOURCE: Bureau of Labor Statistics.

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and summaries were published in the August and September 1962 *Monthly Labor Review*.[13] The September report was a followup to their study in the August issue showing that divergence in the statistical methods and definitions used in compiling unemployment statistics was a relatively minor influence in explaining differences in the 1960 unemployment rates in the eight countries studied. In their September article, Myers and Chandler investigated demographic, economic, legal, and social factors that might have affected the comparative levels of unemployment rates. Their study found no one factor to be the "most important" in explaining the high U.S. rate.

Demographic factors and the composition of the workforce did not go very far in providing a satisfactory general explanation of the differences in unemployment rates among the countries covered. Myers and Chandler concluded that the countries with lower unemployment rates than the United States differed from it in two main respects: (1) they experienced a considerably faster rate of economic growth during the 1950s; and (2) as a result of their own individual customs and traditional employment relationships, their workers enjoyed somewhat more assurance of job stability than did U.S. workers.

BLS Bulletin on unemployment comparisons. In 1978, Sorrentino updated Myers and Chandler's analysis in a chapter that was included in a comprehensive bulletin on unemployment

comparisons.[14] The study concluded that the following factors together helped to explain the comparatively high U.S. unemployment rates that prevailed during the 1960–78 period: (1) the relatively rapid increase in the U.S. labor force, compared with much slower growth or declining labor forces in Europe and Japan; (2) a higher and still growing proportion of U.S. youth in the workforce (a result of the U.S. postwar baby boom), which was significant because young persons tended to have much higher unemployment rates than adults; (3) the relatively small proportion of the U.S. labor force engaged in agriculture and the large wage and salary component, together exposing more people to the possibility of unemployment (by contrast, some foreign countries still had relatively large agricultural sectors, and most had a large proportion of small, family-owned businesses, which shielded self-employed and unpaid family workers from the threat of unemployment); (4) cyclical flows of foreign workers, termed "guest workers," to and from certain European countries, which helped to dampen unemployment increases during recessions; (5) widespread use of short-time work compensation systems abroad, which allowed employers to reduce hours instead of laying off workers; and (6) higher turnover rates and greater worker mobility in the United States, compared with stronger job security in Europe and Japan, causing higher levels of "frictional" unemployment in the United States.

Sectoral employment trends. In 1971, Sorrentino analyzed sectoral employment shifts in the major industrial countries over the 1950–70 period, and this work was updated by Godbout in 1993 to cover the 1970–90 period.[15] The articles explain that, generally, with a nation's economic development and progress in industrialization, the distribution of the employed population shifts from agriculture to industrial activities and, further, from these sectors to service activities. The United States emerged as the world's first "service economy," defined as an economy with more than 50 percent of employment in service-producing activities, shortly after World War II. With some lag, the other industrial nations were found to be following that pattern of sectoral development.

Youth unemployment analysis. In 1981, Sorrentino prepared an analysis of youth unemployment that was international in scope and that covered the period 1960 to 1979.[16] The study looked at factors that helped to explain the international disparities in youth unemployment. Among the characteristics Sorrentino found to be associated with low youth unemployment in countries such as Germany and Japan were a declining trend in the youth labor force, little labor force activity by students, the widespread use of apprenticeship training, and relatively more emphasis on setting out on one's career path at an early age. For those countries with relatively high youth unemployment during the period—particularly the United States and Canada—certain common factors also were singled out: rapid increases in the youth labor force, a sizable student labor force, and an emphasis on general education and extended schooling, rather than on the structuring of the early work years

by such devices as apprenticeship. The study noted that the comparative picture for youths was changing by the end of the period analyzed.

Analysis of participation rates. Overall trends in labor force participation rates are similar to trends shown by the employment-to-population ratios discussed in this article. After all, the two indicators are quite close in definition: the participation rate is the labor force (employed plus unemployed) as a percentage of the working-age population; the employment

Table 7.	Annual average rate of change in employment by sector in G7 countries, 1960–2000		
Country	Agriculture	Goods-producing industries	Service-producing industries
United States	−1.2	0.8	2.5
Canada	−1.2	1.4	3.1
Japan	−3.5	1.2	2.1
Europe (G4):	−3.7	−.6	1.7
France	−3.8	−.6	2.1
Germany[1]	−4.2	−.7	1.5
Italy	−4.3	.0	1.7
United Kingdom	−2.4	−1.2	1.4

[1] Employment adjusted to Germany (unified) throughout the period.

NOTE: Agriculture encompasses forestry, hunting, and fishing. Goods-producing industries are mining, manufacturing, and construction. Service-producing industries are transportation, communication, public utilities, trade, finance, public administration, private household services, and miscellaneous services.

SOURCE: *Comparative Civilian Labor Force Statistics, Ten Countries, 1959–2001* (Bureau of Labor Statistics, Mar. 25, 2002); on the Internet at **http://www.bls.gov/fls/home.htm**.

Table 8.	Indicators of part-time and full-time employment in G7 countries, selected periods, 1983–2000						
[in percent]							
Country	Part time employment as a percent of total employment			Annual rates of change			
				Full time		Part time	
	1983	1990	2000	1983–90	1991–2000	1983–90	1991–2000
United States	15.4	13.8	12.8	2.8	1.9	0.9	0.4
Canada	16.8	17.0	18.1	2.4	1.6	2.6	1.6
Japan[1]	16.1	19.2	23.1	.7	−.5	3.9	1.6
Europe (G4):	12.3	13.6	16.8	.7	−.2	2.5	3.0
France	9.7	12.2	14.2	−.9	.5	2.8	2.6
Germany[2]	13.4	13.4	17.6	1.6	−1.0	1.7	4.3
Italy	7.8	8.8	12.2	.2	−.5	2.0	3.6
United Kingdom	18.4	20.1	23.0	1.8	.1	3.4	1.6

[1] Japan's data are not comparable to those for the other countries. (See text.)

[2] Former West Germany in 1983 and 1990 and Germany (unified) in 1991 and 2000.

NOTE: Part-time employment is defined as employment of persons usually working 30 or fewer hours per week in their main job. Data are only for persons declaring usual hours worked. Except for the United States, the data relate to total employment. For the United States, the data relate to wage and salary employment only.

SOURCE: *Labor Force Statistics, 1980–2000* (Paris, Organization for Economic Cooperation and Development, 2001).

**Chart 7.** Ratio of full-time to part-time employment in United States, Canada, and Europe (G4), 1983–2000
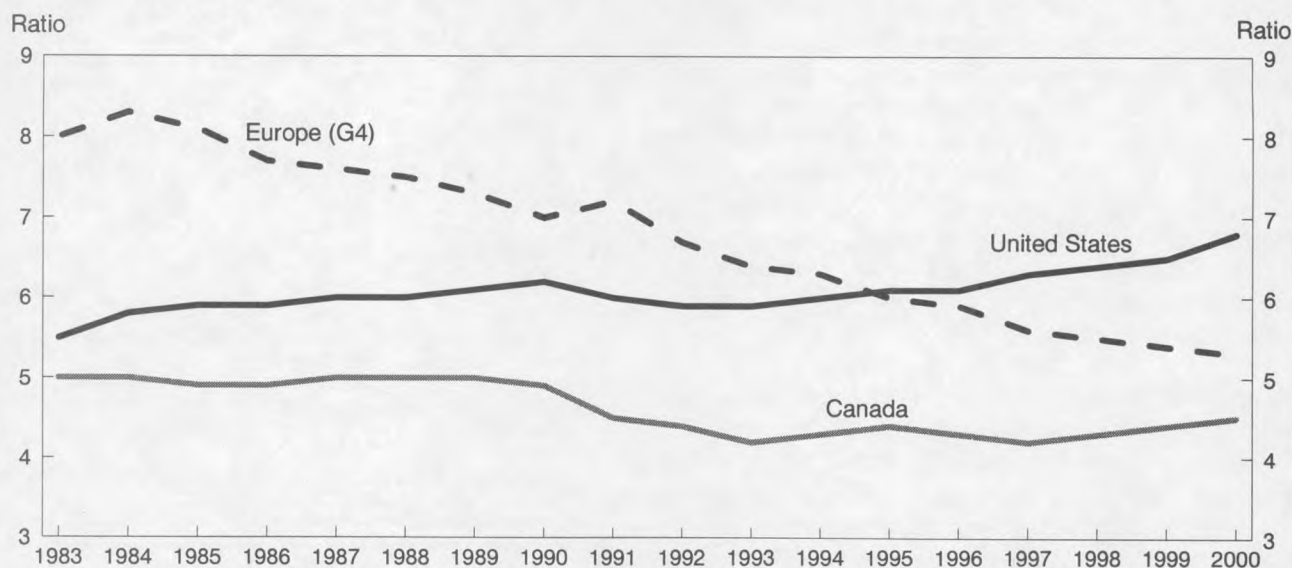
Ratio

Ratio

NOTE: Trend line for Europe (G4) includes data for the former West Germany through 1990; thereafter, the data refer to Germany (unified).

SOURCE: Labor Force Statistics, 1980–2000 (Paris, Organization for Economic Cooperation and Development, 2001).

ratio is employment as a percentage of the working-age population.

A 1983 *Review* article by Sorrentino analyzed international trends in labor force participation over the period from 1960 to 1981.[17] During that period, many of the comparative trends and relationships discussed herein, such as the wide differences in levels and trends of youths' and women's employment-to-population ratios, had already been established. The study found that the large international differences in youth activity rates reflected variations in the propensity of youths to continue in school or enter the labor market, or to combine school with work, as in the United States.

The declining trend in men's participation and employment ratios was already evident in Sorrentino's 1983 study and was said to be largely attributable to the extension of years of schooling and earlier retirement. Changes in the age structure of the population also had some effect. These forces influenced women's activity rates as well, but in some countries—particularly the United States—they were outweighed by changing social attitudes toward the role of women, causing many to look outside the home to find market-based work. A greater availability of part-time jobs and the rise of the service sector also were factors. Cross-country differences in women's participation rates were explained partly by differences in the rate of change in the industrial structure of the various economies. The relative size and rate of increase of the service-producing sector, a larger source of jobs for women than the goods-producing sector, played a role in the international differences.

Mobility of the workforce. In another 1983 *Review* article, former BLS Commissioner Janet L. Norwood discussed labor market contrasts between the United States and Europe.[18] Norwood noted that there was one area in particular in which Europe and the United States diverged sharply: the nature of their labor market dynamics. In the United States, most people have relatively short spells of unemployment, interspersed with periods of employment and of (often voluntary) separation from the labor force. By contrast, Europeans have much lower levels of labor market flows. These differences in labor market dynamics show up best in comparative data on the duration of unemployment and on job growth.

Norwood observed that U.S. workers tended to move into and out of employment and unemployment frequently, whereas European joblessness tended to reflect a much larger group of long-term unemployed. She went on to explain the difference in this way:

> Certainly, differences in history and cultural attitudes play an important role in mobility patterns. European workers seem much more reluctant to

Table 9. Unemployment rates in the European Union and selected member countries, civilian labor force basis,[1] 1990–2000

Year	European Union[2]	Austria	Belgium	Denmark	Finland	Greece[3]	Ireland	Nether-lands	Portugal	Spain	Sweden
1990	8.1	–	6.7	7.7	3.2	6.4	13.4	6.2	4.8	16.2	1.8
1991	8.2	–	6.6	8.4	6.6	7.0	14.7	5.8	4.2	16.4	3.1
1992	9.2	–	7.2	9.2	11.7	7.9	15.4	5.6	4.3	18.4	5.6
1993	10.7	3.9	8.8	10.2	16.4	8.6	15.6	6.6	5.7	22.7	9.3
1994	11.1	3.8	10.0	8.2	16.6	8.9	14.3	7.1	6.9	24.1	9.6
1995	10.7	3.9	9.9	7.2	15.4	9.2	12.3	6.9	7.3	22.9	9.1
1996	10.8	4.4	9.7	6.8	14.6	9.6	11.7	6.3	7.3	22.2	9.9
1997	10.6	4.4	9.4	5.6	12.6	9.8	9.9	5.2	6.8	20.8	10.1
1998	9.8	4.5	9.3	4.9	11.4	10.9	7.5	3.8	5.2	18.6	8.4
1999	9.0	4.0	8.6	4.8	10.2	11.6	5.6	3.2	4.5	15.8	7.1
2000	8.1	3.7	6.9	4.4	9.7	11.1	4.2	2.8	4.1	14.0	5.8
Average, 1990–2000 ..	9.7	4.1	8.5	7.0	11.7	9.2	11.3	5.4	5.6	19.3	7.3

[1] Excludes conscripts, but includes career military in private households.

[2] Average for 15 countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom. For 1990, the figure excludes Austria, Finland, and Sweden; for 1991 and 1992, the figures exclude Austria. These three countries joined the European Union in January 1995. Data for four countries covered in the BLS international comparisons program—France, Germany (former West Germany prior to 1991), Italy, and the United Kingdom—are not shown here. The BLS adjusted rates are about the same as the European Union estimates. The European Union unemployment rates since 1991 include rates for Germany (unified); the 1990 figure includes the rate for the former West Germany.

[3] Data refer to the spring of each year.

NOTE: Dash indicates data not available.

SOURCE: Statistical Office of the European Communities (Eurostat) and the Bureau of Labor Statistics (for Sweden only), May 3, 2002. This table (excluding data for Sweden) is updated on a monthly basis by the Bureau of Labor Statistics and is made available on the Internet at: http://www.bls.gov/fls/home.htm.

change jobs voluntarily than their American counterparts. There is also less of a tendency to change residence in search of jobs. In the United States, mobility is considered desirable, even though the search for a better job may entail some short-term unemployment. Americans are still experiencing sharp shifts in regional economic development and opportunity. In addition, young Americans tend to do more job changing before settling into more permanent careers than European youth do.[19]

Broader measures of underutilization. In 1993 and 1995, Sorrentino published studies broadening the international analysis of unemployment to cover seven measures of underutilization known then as U–1 through U–7.[20] Both studies found that Japan and Sweden, the countries almost always having the lowest unemployment rates as conventionally measured, experienced by far the largest increases when the definition was expanded to include persons working part time for economic reasons and discouraged workers. In times of recession and recovery alike, the Japanese unemployment rate

consistently tripled when these additional measures were incorporated.[21]

The 1995 study explained that understanding the effect of Sweden's pioneering programs for retraining and employing the unemployed is important in gaining an appreciation of that country's labor market situation. Sweden's very low unemployment rates during 1960–90 were partly explained by a large expansion of those programs during recessions, shielding many persons from unemployment. However, the programs were unable to keep Swedish unemployment from rising to unprecedented levels in the 1990s. If persons in labor market programs were added to the already high number of jobless individuals in 1993, Sweden's conventional unemployment rate of 9.3 percent would have risen to 14 percent.

In addition to the foregoing BLS studies, non-BLS academicians, research institutes, and international organizations have published numerous analyses of international differences in labor markets. The material that follows presents but a small sampling of this literature, beginning with some of the research conducted by two international organizations: the OECD and the International Labor Office (ILO). A few of the major studies in the area of "labor market flexibility" are then discussed, and the

section ends with references to several bilateral studies. Many of the publications or studies described contain citations to the larger body of work in each subject area.

OECD Employment Outlook.   Since 1983, the OECD has published annual assessments of comparative labor market developments and prospects in its *Employment Outlook* series.[22] Each edition takes up special topics that enrich the reader's understanding of comparative trends and draws on a larger published literature, citations to which can be found within. For instance, chapter 2 of the 1999 edition explored the relationship between employment protection legislation and labor market performance, and chapter 4 of the 1996 edition analyzed youth and the labor market over the 1980s and 1990s.

Analysis of the smaller European countries.   In 2000, Peter Auer of the ILO presented a report entitled *Employment Revival in Europe*[23] that investigated the labor market success of Austria, Denmark, Ireland, and the Netherlands in the 1990s. The study argues that the relative labor market success of these four countries during that time, compared with the G4 European countries, was attributable to three policy areas: social dialogue, macroeconomic policy, and labor market policy. According to Auer, social dialogue created a climate of confidence among employers, unions, and the Government that led to wage moderation and to reforms in social protection systems. Wage moderation was part of a stabilization-oriented macroeconomic policy that led to low inflation and low interest rates. Labor market policy, and social protection in general, created the necessary environment for labor market adjustment, providing income support, training, job creation, and, sometimes, early retirement for the unemployed.

Global youth unemployment.   Another ILO study, by Niall O'Higgins, published in 2001, investigated youth unemployment all over the world from a policy perspective.[24] One aspect examined was why some countries (such as Germany) have been notably more successful than others in maintaining low levels of youth unemployment. The role of education and training systems, including apprenticeship, was found to be important in facilitating the transition from school to work.

Labor market flexibility studies.   A key concept that emerged in the debate over U.S.-European labor market differences over at least the past 20 years is "labor market flexibility." This concept means different things to different analysts. In general, it refers to (1) the greater responsiveness of wages and employment to shifts in demand and supply and (2) the lesser amount of regulation and institutional rigidity. The conventional wisdom was that Europe's high unemployment and lack of job growth were attributable to its inflexible and regulated job markets; by

contrast, the success of the U.S. job market was seen as a product of its flexible nature.[25] The evidence from research studies has not converged to support a general proposition that all inflexibilities matter, but some "rigidities" have been identified as having a negative impact on a country's employment and unemployment performance.

The literature on labor market flexibility has evolved into a rather large body of work. In his 1994 *Review* article, Brodsky traced the historical evolution of the "labor market flexibility" concept in the context of changing economic conditions.[26] Three other studies not only review and evaluate much of the existing literature, but also exemplify different perspectives on the flexibility issue: editor Rebecca M. Blank's work uses the approach of comparing only two or three countries at a time (a bilateral and a trilateral study, respectively) in terms of specific types of social protection mechanisms, Stephen Nickell investigates a wider range of countries and variables, and Robert Bednarzik both covers a wide range of countries and adds variables relating to product and capital markets.

Blank's 1994 volume of mainly bi- and trilateral academic studies provided evaluations of the impact of a broad set of social protection mechanisms—not just labor market policies—on labor market flexibility.[27] In most cases, the studies rejected the existence of a substantial tradeoff between various social protection mechanisms (such as employment protection laws, health insurance, and child care policies) and labor market flexibility.

In a 1997 article, Nickell analyzed the impact of various measures of labor market flexibility on unemployment in 20 OECD countries during two periods: 1983–88 and 1989–94.[28] He found that some "so-called rigidities" were associated with high unemployment, and some were not. Rigidities that were associated with high unemployment included a generous and lengthy duration of unemployment benefits, combined with little or no offsetting pressure on the unemployed to obtain work, and high overall taxes on labor. In contrast, strict employment protection legislation and generous levels of unemployment benefits accompanied by pressure on the unemployed to take jobs (for example, a fixed duration of benefits) were not associated with high unemployment.

In a 2001 study for a Joint U.S.-European Union Seminar, Bednarzik expanded upon Nickell's model by adding variables for the flexibility of product and capital markets during the 1995–99 period in an examination of 24 OECD countries.[29] In Bednarzik's model, capital market flexibility (easier and greater access to capital) emerged as an important factor in explaining divergent unemployment and job growth patterns in different countries.

Japan-U.S. comparison.   In the April 2002 issue of the *Review*, Japanese economist Toshihiko Yamagami updated and expanded upon U.S.-Japan comparisons, one aspect of the BLS

analysis of U–1 through U–7 described earlier.[30] Using the new BLS indicator framework known as U–1 through U–6, introduced in 1995, Yamagami focused on U–3 through U–6, the expanded indicators. He covered the period from 1994 to 2000 and showed that poor Japanese economic performance, coupled with the strongly positive U.S. performance, served to change the positions of the two countries relative to both unemployment and broader underutilization rates. In a concluding section, Yamagami presented his views on the deterioration of Japan's labor market in the 1990s and the viability of Japan's well-known long-term employment system.

Canada-U.S. comparisons. Statistics Canada has noted that prior to 1981 the Canadian unemployment rate was, on average, roughly the same as the U.S. rate. A sustained gap began to open early in the 1980s, and the Canadian rate averaged 2 percentage points higher than the U.S. rate throughout the decade. In the 1990s, the gap widened further, rising to about 4 percentage points. Statistics Canada concluded, "While many explanations have been developed for the unemployment gap, a definitive explanation has yet to emerge."[31]

A set of studies available from the Canadian Centre for the Study of Living Standards[32] investigated Canada's labor market developments in the 1990s, focusing on structural aspects of unemployment. Several of the studies looked for lessons for Canada from the international experience. The major conclusion of one of the international studies was as follows:

> [T]here is no magic institutional bullet for un-
> employment reduction. Different countries have
> achieved low unemployment using different
> institutional arrangements. As Stanford points
> out, both countries with unregulated (the United
> States) and regulated labor markets (the
> Netherlands) can achieve low unemployment,
> although favorable demand conditions are
> needed. In the United States, job insecurity in a

deregulated labor market has allowed the Federal Reserve Board to pursue expansionary monetary policy without inflation. In the Netherlands, union-employer wage policies permitted expansionary macroeconomic policies without excessive wage increases.[33]

Marilyn E. Manser and Garnett Picot, in a 1999 study published in the *Review*, compared the growth of self-employment in the United States with that in Canada.[34] The study found that self-employment accounted for the majority of net employment growth that took place in Canada in the 1990s, whereas it accounted for effectively none of the net growth in the United States over the same period. (U.S. job growth was concentrated in wage and salary jobs.) During the 1980s, the role of self-employment had been fairly similar in the two countries.[35]

THE STUDIES DISCUSSED IN THIS ARTICLE, written at varying times over the past 40 years, propose numerous explanations for cross-country differences in labor market outcomes. Clearly, the outcomes during any period are influenced by a complex variety of factors, including changing demographic trends, institutional arrangements, and government policies, not only those targeted directly at the labor market, but also fiscal and monetary policies that affect the demand for labor. Other forces outside the labor market, such as those associated with product and capital markets, also affect the labor market. Furthermore, unemployment by itself may not provide a complete picture of cross-country labor underutilization in situations where workers are more likely either to work shorter hours rather than be laid off or to escape the labor market altogether because they become discouraged. A comprehensive explanation that fits all countries and all periods has, so far, eluded researchers. Perhaps the most fruitful approach is one of bilateral comparisons, such as the studies cited comparing the United States and Japan or the United States and Canada. □

Notes

[1] For the full BLS report, see *Measuring Employment and Unemployment, Report of the President's Committee to Appraise Employment and Unemployment Statistics* (Washington, DC, U.S. Government Printing Office, September 1962). For articles summarizing the BLS findings, see Robert J. Myers and John H. Chandler, "International Comparisons of Unemployment," *Monthly Labor Review*, August 1962, pp. 857–64; and "Toward Explaining International Unemployment Rates," *Monthly Labor Review*, September 1962, pp. 969–74.

[2] The Group of Seven (G7) was launched in 1975 at a summit of the heads of State of six countries (the United States, France, Germany, Italy, Japan, and the United Kingdom). Canada was included in 1976. Representatives of the G7 countries meet annually to discuss the principal political and economic issues of the day. Because Russia has taken part in the annual economic discussions since 1997, the group is now often referred to as the G8.

[3] Canada's mixed performance can be explained by the fact that its labor force (the sum of employment and unemployment) growth has been very rapid, outpacing the country's employment growth and leading to proportionally more unemployment than employment. This has kept unemployment rates high, even in the face of relatively strong employment performance.

[4] Then, for convenience, each G7 member—Europe, the United States, Canada, and Japan—is called a group in this article, even though the last three are actually single countries.

[5] Aaron E. Cobet and Gregory A. Wilson, "Comparing 50 years of labor productivity in U.S. and foreign manufacturing," this issue, pp. 51–65. In 1973, cyclical peaks in real gross domestic product (GDP) occurred in the United States, Japan, and the United Kingdom. France, Germany, and Italy attained peaks the following year. Canada was the only G7 country that had rising real GDP throughout the 1970s. Six of the seven countries reached peaks in real output between 1990 and 1992. Japan was the only country covered to have uninterrupted real GDP growth in the 1990s through 1997. The year 2000 saw real-output growth in all seven countries.

[6] For a detailed analysis of comparative unemployment and employment trends in the 1960–77 period, see Constance Sorrentino, *International Comparisons of Unemployment*, Bulletin 1979 (Bureau of Labor Statistics, August 1978), chapter 2.

[7] For a discussion of cyclical flows of "guest workers," see Sorrentino, *International Comparisons of Unemployment*, pp. 51–52.

[8] For example, see Alan B. Krueger and Jorn-Steffan Pishke, "Observations and Conjectures on the U.S. Employment Miracle," Working Paper No. 390 (National Bureau of Economic Research, August 1997).

[9] The BLS database contains a series on unemployment rates by age, but it has not been maintained on a lengthy historical basis. The OECD series used in the table is judged to be comparable across countries and corresponds quite closely to the BLS figures for 1997–2000.

[10] Proportional distributions of employment by economic sector can be found in table 7 of *Comparative Civilian Labor Force Statistics, Ten Countries, 1959–2001* (Bureau of Labor Statistics, Mar. 25, 2002); on the Internet at **http://www.bls.gov/fls/home.htm**.

[11] A table similar to table 9, covering the non-G4 European Union countries, is updated each month by the Bureau. The table is on the Internet at **http://www.bls.gov/fls/home.htm**.

[12] See *Comparative Civilian Labor Force Statistics*, table 2.

[13] See note 1.

[14] Sorrentino, *International Comparisons of Unemployment*, chapter 5.

[15] Constance Sorrentino, "Comparing employment shifts in 10 industrialized countries," *Monthly Labor Review*, October 1971, pp. 3–11; and Todd Godbout, "Employment change and sectoral distribution in 10 countries, 1970–90," *Monthly Labor Review*, October 1993, pp. 3–20.

[16] Constance Sorrentino, *Youth Unemployment: An International Perspective*, Bulletin 2098 (Bureau of Labor Statistics, September 1981). See also Constance Sorrentino, "Youth unemployment: an international perspective," *Monthly Labor Review*, July 1981, pp. 3–15, for a summary of the material in the bulletin.

[17] Constance Sorrentino, "International comparisons of labor force participation, 1960–81," *Monthly Labor Review*, February 1983, pp. 25–36.

[18] Janet L. Norwood, "Labor market contrasts: United States and Europe," *Monthly Labor Review*, August 1983, pp. 3–7.

[19] Ibid., p. 7.

[20] Constance Sorrentino, "International comparisons of unemployment indicators," "*Monthly Labor Review*, March 1993, pp. 3–24; and "International unemployment indicators, 1983–93, *Monthly Labor Review*, August 1995, pp. 31–50. The two articles are on the Internet at **http://www.bls.gov/opub/mlr/1993/03/art1full.pdf** and **http://www.bls.gov/opub/mlr/1995/08/art4full.pdf**, respectively.

[21] For an earlier BLS analysis, see Constance Sorrentino, "Japan's low unemployment: an indepth analysis," *Monthly Labor Review*, March 1984, pp. 18–27.

[22] For further information and an index of each edition of *Employment Outlook*, visit the Internet site **http://www.oecd.org/EN/documents/0,,EN-documents-728-nodirectorate-no-11-no-5,00.html**.

[23] Peter Auer, *Employment Revival in Europe* (Geneva, International Labor Office, 2000).

[24] Niall O'Higgins, *Youth Unemployment and Employment Policy: A Global Perspective* (Geneva, International Labor Office, 2001).

[25] See, for instance, Melvin M. Brodsky, "Labor market flexibility: a changing international perspective," *Monthly Labor Review*, November 1994, pp. 53–60, especially p. 54; and Stephen Nickell, "Unemployment and Labor Market Rigidities: Europe versus North America," *Journal of Economic Perspectives*, summer 1997, pp. 55–74, especially p. 55.

[26] Brodsky, "Labor market flexibility."

[27] Rececca M. Blank, ed., *Social Protection versus Economic Flexibility: Is There a Tradeoff?* National Bureau of Economic Research Comparative Labor Market Series (Chicago, University of Chicago Press, 1994).

[28] Nickell, "Unemployment and Labor Market Rigidities."

[29] Robert Bednarzik, "The Importance of 'Flexible' Markets in Explaining U.S. and European Job Growth and Unemployment Differentials," in *Labor Market Flexibility: Proceedings of a Joint U.S. and European Union Seminar* (U.S. Department of Labor, Bureau of International Labor Affairs, September 2001). Free copies are available from Robert Bednarzik by calling 202–693–4867 or e-mailing **Bednarzik-Robert@dol.gov** or by writing to the Bureau of International Labor Affairs, Room S–5317, U.S. Department of Labor, 200 Constitution Avenue, N.W., Washington, DC, 20210.

[30] Toshihiko Yamagami, "Underutilization of labor resources in Japan and the United States," *Monthly Labor Review*, April 2002, pp. 25–43; on the Internet at **http://www.bls.gov/opub/mlr/2002/04/art3full.pdf**.

[31] Statistics Canada, "Canada-US Labour Market Comparison," in *Labour Force Update*, Autumn 1998, p. 3.

[32] On the Internet at **http://www.csls.ca.** Click on "Special CPP Issue on Structural Unemployment."

[33] Andrew Sharpe and Timothy C. Sargent, "Structural Aspects of Unemployment in Canada: Introduction and Overview," *Canadian Public Policy*, vol. XXVI, special supplement 1, 2000, p. S4. The study is based on Jim Stanford, "Canadian Labour Market Developments in International Context: Flexibility, Regulation and Demand," *Canadian Public Policy*, vol. XXVI, special supplement 1, 2000, pp. S27–S58. (See preceding note for Internet site at which both studies can be found.)

[34] Marilyn E. Manser and Garnett Picot, "The role of self-employment in U.S. and Canadian job growth," *Monthly Labor Review*, April 1999, pp. 10–25.

[35] The authors cited the following two additional U.S.-Canada comparative studies of net and gross job creation, job security, and job

stability over the past two decades: Marilyn E. Manser and Garnett Picot, "Job Creation in Canada and the United States: What Do We Know and Where Are the Data Gaps?" and Garnett Picot and Marilyn E. Manser, "Job Stability in Canada and the United States: What We Know and the Data Gaps," both papers presented at the Voorburg Meetings on Service Sector Statistics, Copenhagen, Denmark, September 1997.

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International comparisons

A perspective on U.S. and foreign compensation costs in manufacturing

Despite the appreciation of the dollar,
U.S. hourly compensation costs have grown more slowly
than costs in foreign countries over the 1975–2000 period

Chris Sparks,
Theo Bikoi,
and
Lisa Moglia

In 2000, for the first time since 1989, average hourly compensation costs for manufacturing production workers in the United States rose above hourly compensation costs in Europe in U.S. dollar terms. U.S. hourly compensation costs remained well above cost levels in Canada, Mexico, and a group of four newly industrializing economies (NIEs) in Asia—Hong Kong, Korea (the Republic of Korea), Singapore, and Taiwan. Costs in Japan, however, were 11 percent higher than costs in the United States in 2000. (See chart 1.)

With declining barriers to world trade and the increasing importance of trade in many countries, business and labor leaders, and other analysts are concerned with the competitiveness of their countries' exports. Labor costs are a major factor influencing the costs of goods produced by a country relative to those of its trading partners, and consequently its international competitiveness.[1] Reflecting the importance of these labor costs, the European Commission and European Council, for example, have called on member states for moderation in both wage and nonwage labor costs.[2] Eurostat, the statistical office of the European Union, notes that "labour costs considerably influence the choices of political, economic and social decisionmakers, as they account for some two-thirds of the production costs of goods and services. Moreover, knowledge of labour cost levels is an essential tool in the strategic planning of investment, production,

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employment policy or wage levels in collective bargaining."[3]

Over the past quarter-century, hourly compensation costs in the United States have tripled, and costs in competitor economies have risen nearly four-fold in U.S. dollar terms. These costs reflect both comparative changes in costs in terms of national currencies and exchange rate changes. Major changes in the relative position of countries' hourly compensation costs over this 25-year span are evident in the examination of three periods, illustrated in chart 1. From 1975 to 1985, hourly compensation costs for a trade-weighted average of 28 foreign economies grew at a slower rate than in the United States. This was particularly true in the first half of the 1980s, a period that saw strengthening of the U.S. dollar and a widening gap between foreign and U.S. costs. Between 1985 and 1995, however, foreign costs grew at a much faster rate than U.S. costs, with competitor costs nearly reaching U.S. levels in 1995, and costs in Europe and Japan surpassing those in the United States. From 1995 to 2000, costs in the foreign economies fell on a U.S. dollar basis, while U.S. costs continued to rise, with the result that competitor costs are now only three-quarters of the U.S. level, and European costs have fallen below the United States once again. The latter two periods coincide with the weakening of the dollar beginning in 1985 as a result of the "Plaza Accord," and the strengthening of the dollar beginning in 1995.[4] These

exchange rate changes have an important effect on the BLS hourly compensation costs series because they are used to convert foreign costs into U.S. dollars.

This article examines hourly compensation costs and the component parts of compensation in 2000, as well as historical trends over the past 25 years for the United States and several foreign economies, with particular focus on the widening gap between the U.S. and foreign costs in 1975–85, the faster growth of foreign costs in 1985–95, and the slowdown in foreign growth in 1995–2000.[5] The article also analyzes some of the underlying factors that drive changes in relative hourly compensation costs, including compensation costs on a national currency basis, the component parts of compensation, and exchange rates. Exchange rates are used to convert national currency levels of compensation into compensation on a U.S. dollar basis, and changes in these underlying factors are reflected in changes in hourly compensation on a U.S. dollar basis. Exchange rate movements are often volatile, and compensation costs on a U.S. dollar basis can be dramatically affected by them over short periods of time. Over the 25-year period studied, however, it was differences in the rates of compensation growth on a national currency basis that had the larger effect on the U.S. competitive position in many countries.

Hourly compensation costs are discussed for six countries or groups: the United States, Canada, Mexico, Japan, Europe, and the Asian NIEs. Canada, Mexico, and Japan are the countries with the largest shares in U.S. trade. For ease of presen-

tation, Europe is discussed as a region.[6] The Asian NIEs are comprised of Hong Kong, Korea, Singapore, and Taiwan.

The BLS publishes comparative hourly compensation costs for production workers in manufacturing for the United States and 28 foreign economies.[7] Hourly compensation costs differ significantly from the more readily available average hourly earnings statistics published in many countries. Hourly compensation costs consist of pay for time worked; pay for time not worked (such as vacation and holiday pay); seasonal and irregular bonuses; pay in kind; employer expenditures for legally required social insurance programs and contractual and private benefit plans; and other taxes on payrolls or employment.[8] Average earnings do not include all items of labor compensation; they are typically limited to pay for time worked and the omitted items frequently represent a large proportion of total compensation. Moreover, the portion of compensation not included in hourly earnings statistics varies widely among countries. In some countries, the proportion of the omitted items of compensation may make up as little as 20 percent of total compensation costs, while in others nearly 50 percent of compensation may consist of the omitted items. The broader measure of compensation analyzed here therefore permits more meaningful cost comparisons across countries.[9]

Compensation costs in U.S. dollars, 2000

Hourly compensation costs in the United States reached nearly $20 in 2000, about $2 less than the hourly cost (when adjusted

to U.S. dollars) in Japan but a little more than a dollar higher than the trade-weighted average for Europe, and almost $4 higher than in Canada. Hourly compensation costs in the four newly industrializing Asian economies were below $7. Mexican hourly compensation costs in U.S. dollars were well below those of any economy studied. (See table 1.)

These levels of compensation costs can be broken down into three basic components: pay for time worked, other direct pay, and social insurance expenditures—contributing to an understanding of the sources of differences in levels of hourly compensation costs.

Pay for time worked includes basic time and piece rates, plus overtime premiums, shift differentials, other premiums and bonuses paid regularly each pay period, and cost-of-living adjustments.

Other direct pay includes paid leave (vacations, holidays, and other paid leave, except sick leave), seasonal or irregular bonuses and other special payments, selected social allowances, and the cost of payments in kind.

Social insurance expenditures include employer expenditures for legally required insurance programs and contractual and private benefit plans (retirement and disability pensions, health insurance, income guarantee insurance and sick leave, life and accident insurance, occupational injury and illness compensation, unemployment insurance, and family allowances).

In this article, we refer to the combination of other direct pay and social insurance as additional compensation. Analysis of compensation structure after all adjustments (that is, the percentage of compensation cost comprised of pay for time worked, other direct pay, and social insurance) provides insight into the composition of employer costs and yields information about which items are most responsible for differences in total compensation cost levels and trends among countries.

In 2000, compensation costs in Japan were higher than in the United States, but pay for time worked in Japan was about 90 percent of what U.S. employers paid for time worked. (See chart 2.) In Europe, hourly compensation costs were 93 percent of the U.S. level and well above the Canadian level (table 1), but pay for time worked in Europe was just 77 percent of the U.S. level and less than pay for time worked in Canada.[10]

These situations are possible because the share of additional compensation (other direct pay and social insurance) is higher in Japan and Europe than in the United States. In Japan, other direct pay was equal to 26 percent of total compensation in 2000, a much higher percentage than in the United States, where other direct pay was only 7 percent of total compensation. (See chart 3.) As a result, when bonuses and leave time (vacation and holiday pay) are included, direct pay (pay for time worked plus other direct pay) in Japan is higher than in the United States. Within the BLS estimates of hourly compensation costs, bonuses are an especially large part of Japanese costs, equaling 15 percent of hourly compensation costs, while in the United States bonuses are less than 1 percent of hourly compensation costs.

Other direct pay was also substantially more important in Europe than in the United States, comprising 17 percent of total compensation in 2000.[11] According to BLS estimates of components of other direct pay, bonuses in most of Europe were not as large as in Japan, but they were still considerably higher than in the United States, typically about 5–10 percent of total compensation. Another important component of other direct pay, pay for time not worked, was higher in most European countries than in the United States, averaging between 9–12 percent of total compensation in most European countries, compared with about 6 percent in the United States.

The other major category of compensation costs is social insurance. Social insurance made up a higher percentage of costs in Europe than in the United States, Japan, and Canada in 2000. (See chart 3.) The importance of social insurance among European countries varies considerably. Social insurance cost shares in some countries, such as Belgium, France, Italy, and Sweden were near or above 30 percent. In other European countries, however, including Denmark, Ireland, and the United Kingdom, social insurance cost shares were much lower than in the United States. In the Asian

Table 1.	Hourly compensation costs in U.S. dollars for production workers in manufacturing, selected years 1975–2000

[United States = 100]

Country or area	1975	1980	1985	1990	1995	2000
United States	100	100	100	100	100	100
(cost in U.S. dollars)	($6.36)	($9.87)	($13.01)	($14.91)	($17.19)	($19.86)
Canada	94	88	84	107	94	81
Mexico	23	22	12	11	9	12
Japan	47	56	49	86	139	111
Europe	80	100	61	116	128	93
Asian NIES	8	12	13	25	37	34
All 28 competitors	60	67	52	83	95	76

Chart 2. Hourly pay for time worked in U.S. dollars for production workers in manufacturing, 2000
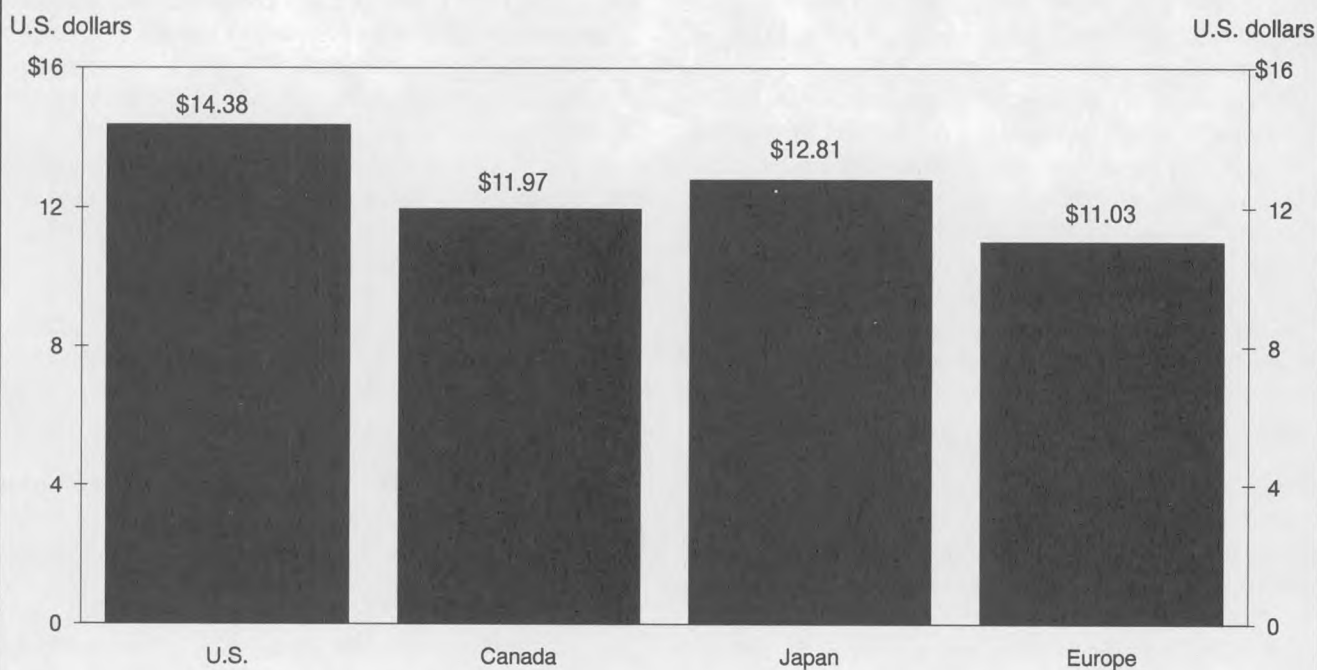
U.S. dollars

U.S. dollars

	U.S.	Canada	Japan	Europe
	$14.38	$11.97	$12.81	$11.03

NOTE: Separate data for pay for time worked and other direct pay are not available for Mexico and the Asian NIEs.

Chart 3. Importance of other direct pay and social insurance expenditures for production workers in manufacturing, 2000
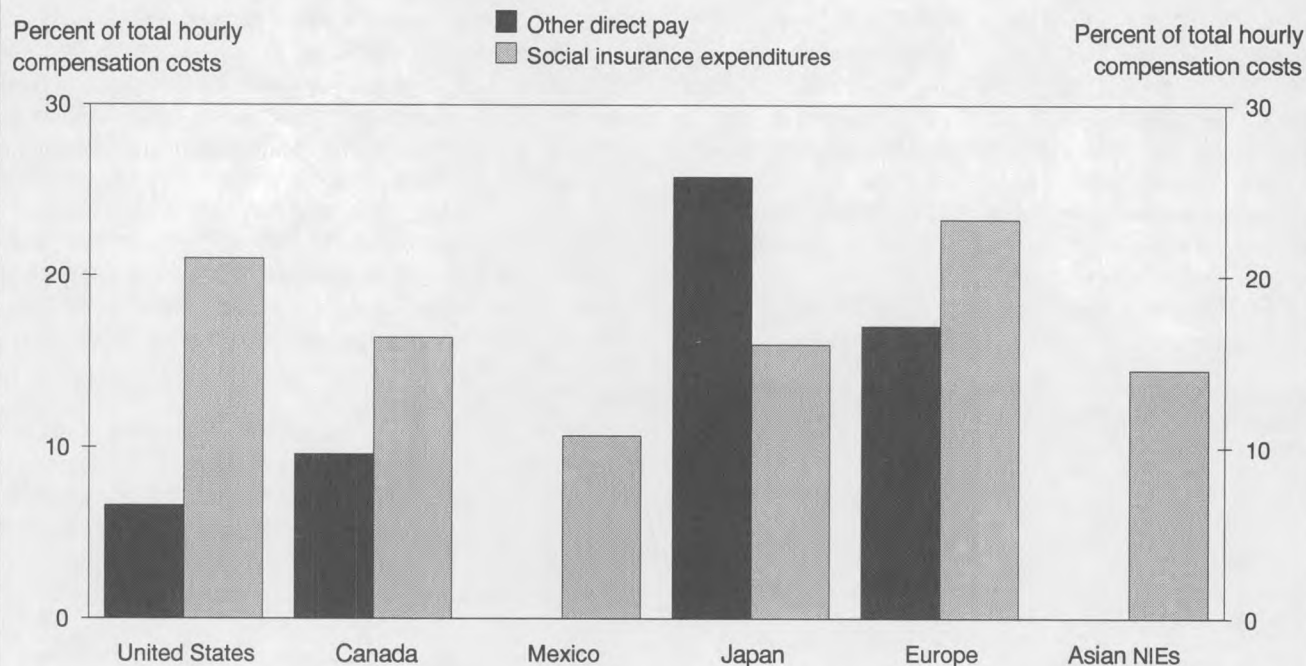
Percent of total hourly compensation costs

Percent of total hourly compensation costs

■ Other direct pay
▨ Social insurance expenditures

United States   Canada   Mexico   Japan   Europe   Asian NIEs

NOTE: Separate data for pay for time worked and other direct pay are not available for Mexico and the Asian NIEs.

NIEs, social insurance cost shares were only 14.5 percent, but they have been rising as a percentage of total compensation costs over the last 25 years. Mexico's share of social insurance costs in hourly compensation was the lowest of the countries compared.

The analysis of compensation structure illustrates the importance of looking at additional compensation costs. Using only pay for time worked data as a means for comparison would result in an inaccurate assessment of differences in employer costs among countries. As noted above, costs for pay for time worked are higher in the United States than in Japan or Europe, but once items of additional compensation are included, total compensation in Japan and several European countries is significantly higher than the United States.

Compensation costs in U.S. dollars, 1975–2000

Growth over three periods. Between 1975 and 2000, hourly compensation costs in the United States rose at an average annual rate of 4.7 percent. This growth was considerably slower than Japan's rate of 8.3 percent and the 11.1-percent growth rate of the Asian NIEs over the 25-year period. Europe's growth rate was more moderate but still rose at a rate higher than the United States. Only in Canada and Mexico did rates grow at a slower pace than in the United States. (See table 2.)

Compensation costs in the United States grew at about the same rate as in Japan between 1975 and 1985, before slowing considerably for the next 15 years. Only the Asian NIEs exhibited significantly faster growth in compensation costs than did the United States over the 1975–85 period. During 1985–95, costs in U.S. dollars in all the foreign economies except Mexico grew at a rate significantly higher than in the United States. Then, in 1995–2000, costs either declined or grew at much slower rates than in the United States, again with Mexico as the exception.

The years between 1985 and 2000 contained dramatic examples of growth and decline in compensation costs. Growth rates in Europe, Japan, and the Asian NIEs were in the double digits for the 1985–95 period, much higher than the U.S. rate of 2.8 percent. In 1995, however, things changed drastically.

Table 2.	Growth in hourly compensation costs for production workers in manufacturing, U.S. dollars 1975–2000			
[Average annual percent change]				
Country or area	1975–2000	1975–1985	1985–1995	1995–2000
United States	4.7	7.4	2.8	2.9
Canada	4.1	6.3	3.9	.1
Mexico	2.1	.8	−.5	10.3
Japan	8.3	7.8	14.2	−1.6
Europe	5.4	4.8	10.4	−2.8
Asian NIEs	11.1	12.8	14.8	1.2
All 28 competitors	6.2	6.5	9.1	.0

Costs in Europe and Japan actually fell during the 1995–2000 period. The Asian NIEs maintained a positive growth rate during these last 5 years, but hourly compensation cost growth slowed to well below that of the United States.

As in Europe, Japan, and the Asian NIEs, Canadian cost growth also decelerated sharply after 1995, but it is noteworthy that trends in Canada did not follow the same pattern as these other economies. Canadian costs accelerated quickly in the latter half of the 1980s, but did not grow at all from 1990 onward.

The pattern in Mexico was reversed from that of the other foreign economies. Mexican compensation costs grew at the slowest rate during 1975–85, and Mexico was the only economy in which hourly compensation fell between 1985 and 1995. However, Mexican costs grew at the fastest rate by far over the final 5 years of the comparison period.

Changes in relative position. The differences in growth rates of the United States and foreign economies result in changes in the relative position of a country's hourly compensation costs in U.S. dollars over time. Chart 4 shows the position of each foreign economy over time relative to the United States. The U.S. level is set to 100 in all years, and each foreign economy's level is expressed as a percentage of the U.S. level in any given year.

Among the foreign economies, Canadian costs, at 94 percent of the U.S. level, were closest to the United States in 1975. Japanese costs were slightly less than half of U.S. costs, while Mexican costs were about a quarter of the United States. Costs in the Asian NIEs were only 8 percent of the U.S. level, averaging a mere 52 cents per hour.

By 1985, U.S. hourly compensation costs per hour had risen to $13.01, the highest compensation costs of all countries studied. Canada was still the country closest to the United States, but relative costs were now only 84 percent of the U.S. level. After rising to the same level as the United States in 1980, European costs declined 5 consecutive years relative to the United States, and Japanese costs remained at about one-half the U.S. level. Relative to the United States, Mexican costs were sharply lower, and costs in the Asian NIEs higher, with the result that costs in both these competitors were about 12 percent of the U.S. level in 1985.

The years between 1985 and 1995 illustrate dramatic changes in hourly compensation costs for the U.S. competitors. After rising above U.S. costs for the first time in 1992, Japanese costs peaked in 1995, 39 percent higher than the United States. Similarly, costs in Europe increased to a level in 1995 a little below Japan but significantly higher than the United States.

With costs rising even faster than in Japan or Europe, the Asian NIEs continued to close the gap with the United States between 1985 and 1995. After several years in the early 1990s

Chart 4. Index of hourly compensation costs in U.S. dollars for production workers in manufacturing, 1975–2000

when costs were higher in Canada than in the United States, Canadian costs were once again lower than the United States by 1995. Mexican costs had been steadily increasing relative to the United States since 1986, but in 1995 Mexican costs were back down to 9 percent of the U.S. level.

Costs in Europe relative to the United States declined every year during the 1995–2000 period, and by 2000 were below the U.S. level. Japanese costs, which had been about $7 higher than the United States in 1995, fell 3 consecutive years to a level below the United States in 1998. Following rapid growth in costs in 1999 and 2000, however, Japan once again became the economy with the highest compensation costs.

Costs in the Asian NIEs dropped 12.6 percent in 1998, and these countries still had a lower cost level relative to the United States in 2000 than in 1995. Although costs in Mexico rose from 1995 to 2000, Mexico continued to have very low costs in 2000, only about one-third the level of the Asian NIEs, the competitor with the next lowest costs. Canadian costs remained essentially flat after 1995, and, with U.S. costs continuing to rise, were only 81 percent of the U.S. level in 2000.

Compensation in national currency and exchange rates

Changes over time in compensation costs denominated in U.S. dollars reflect the underlying national wage and benefit trends measured in national currencies, as well as frequent and sometimes sharp changes in currency exchange rates. Between 1975 and 2000, both of these factors played an important part in determining relative trends in compensation costs on a U.S. dollar basis. In this section, trends in both national currency compensation costs and exchange rates are analyzed.

Exchange rate changes play a key role in the competitive position of the United States. After that position deteriorated somewhat between 1975 and 1985 due to the strength of the U.S. dollar, a weakening dollar in 1985–95 helped improve the U.S. competitive situation. The revival of a strong U.S. dollar in the last 5 years of the 1990s corresponded with a decline in U.S. competitiveness as reflected in hourly compensation costs denominated in U.S. dollars.

While volatile fluctuations in exchange rates often overshadow trends in compensation costs in national currency over short time periods, differences in the compensation cost trends in the United States and foreign countries have a significant impact on competitiveness over longer time periods. Throughout those 25 years between 1975 and 2000, hourly compensation costs denominated in national currencies grew faster in most of the competitors than in the United States, contributing to an improvement in the U.S. competitive standing. (See table 3.)

Chart 5 illustrates the combination of the growth in hourly compensation costs in national currency and growth in ex-

| Table 3. | Hourly compensation costs in U.S. dollars for production workers in manufacturing, average annual percent changes, 1975–2000 |

[Average annual percent change]

Country or area	1975–2000	1975–1985	1985–1995	1995–2000
U.S				
U.S. dollar basis	4.7	7.4	2.8	2.9
National currency	4.7	7.4	2.8	2.9
Exchange rate	–	–	–	–
Canada				
U.S. dollar basis	4.1	6.3	3.9	.1
National currency	5.7	9.5	4.0	1.7
Exchange rate[1]	–1.5	–2.9	–.1	–1.6
Mexico				
U.S. dollar basis	2.1	.8	–.5	10.3
National currency	33.2	36.7	35.2	19.2
Exchange rate[1]	–23.3	–26.1	–27.5	–7.5
Japan				
U.S. dollar basis	8.3	7.8	14.2	–1.6
National currency	4.0	5.5	4.0	1.2
Exchange rate[1]	4.1	2.2	9.8	–2.7
Europe				
U.S. dollar basis	5.4	4.8	10.4	–2.8
National currency	6.8	10.5	5.1	3.1
Exchange rate[1]	–1.3	–5.1	5.0	–5.7
Asian NIES				
U.S. dollar basis	11.1	12.8	14.8	1.2
National currency	11.9	15.5	11.8	5.5
Exchange rate[1]	–.7	–2.3	2.7	–4.0
All 28 competitors				
U.S. dollar basis	6.2	6.5	9.1	.0
National currency	9.7	13.6	8.6	4.3
Exchange rate[1]	–2.6	–5.2	1.1	–4.0

[1] Value of foreign currency relative to the U.S. dollar.

change rates (the value of the foreign currencies). When both bars have values greater than zero, both the increase in hourly compensation in national currency and the changes in exchange rates are contributing to increase hourly compensation costs on a U.S. dollar basis. When the exchange rate bar is negative (for example, Europe in 1975–85), the change in the exchange rate offsets the increase in national currency hourly compensation, indicating that the change in hourly compensation on a U.S. dollar basis is somewhat less than the increase on a national currency basis.

Measured in national currency, hourly compensation costs grew fastest in the 1975–85 period for the United States and each of the foreign economies. Between 1985 and 1995, growth was still strong, but since 1995 growth has slowed considerably in all the competitors while growing at about the same rate in the United States. As an indication of the slowing of growth on a national currency basis, the slowest rate of growth during the 1975–85 period—5.5 percent in Japan—matched the second fastest growth rate in 1995–2000.

While hourly compensation costs in the United States also grew faster during the 1975–85 period than in later periods, they were never as high as the growth rates of costs in na-

tional currency in several foreign economies. Cost growth decelerated faster and earlier in the United States than in the other economies; between 1985 and 1995 costs in all competitors grew at rates faster than the United States. Between 1995 and 2000, however, U.S. growth rates remained the same while compensation costs on a national currency basis continued to moderate in the competitor countries. As a result, only Mexico and the Asian NIEs had significantly higher growth rates than the United States during this period.

The growth rates in national currency, as well as changes in the exchange rates of foreign currencies relative to the U.S., had a major impact on the competitive positions of the United States and the competitors. The severity and timing of the impact followed a different pattern in each competitor.

In Europe, the trade-weighted growth of hourly compensation costs measured in national currency was about 2 percentage points higher than growth in the United States over the entire 25-year period. However, the slowdown in growth of European costs over that time was much steeper than the decline in the growth rate of U.S. costs. Between the 1975–85 and 1995–2000 periods, European cost growth rates fell about 7-1/2 percentage points, compared with a 4-1/2 percentage point drop in U.S. growth during the same period. The years 1999 and 2000 are particularly significant in that the growth rate of hourly compensation costs in national currency was lower in Europe than in the United States for the first time since this series began in 1975.

Additional compensation (other direct pay and social insurance) increased at a faster rate than pay for time worked in Europe over the 25-year period, as reflected in the increasing share of total compensation costs accounted for by the additional compensation components. The shares of both increased as a percentage of total compensation costs through 1990, but since that time, the structure of compensation costs in Europe has remained relatively stable. The following shows other direct pay and social insurance as a percentage of total compensation in Europe:

	Other direct pay	Social Insurance
1975	15.8	20.8
1980	16.5	22.2
1985	17.2	22.6
1990	17.6	23.4
1995	17.3	23.9
2000	17.0	23.3

After appreciating moderately against the dollar between 1975 and 1980, the European currencies underwent two distinct periods of change in the 1980s. (See chart 6.) The currencies in Europe began to weaken against the dollar in 1981, declining at a rate of 11.7 percent per year through 1985.

Chart 5. Hourly compensation costs for production workers in manufacturing and exchange rates

■ Compensation in national currency ▨ Value of foreign currency relative to U.S. dollar
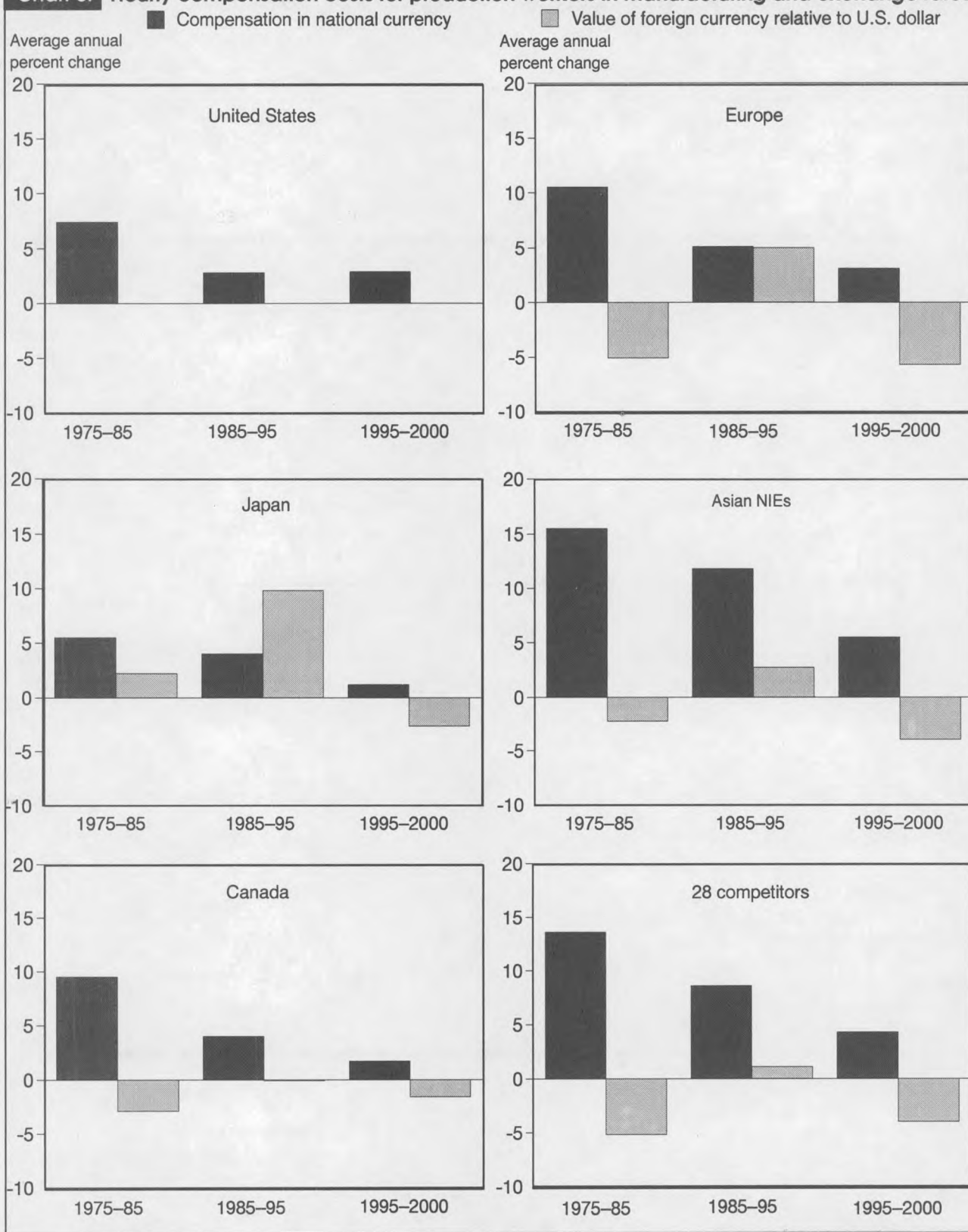
Chart 6. Exchange rate growth, 1975–2000 (value of foreign currency relative to U.S. dollar)

1975 = 100

1975 = 100

1975 = 100

1975 = 100
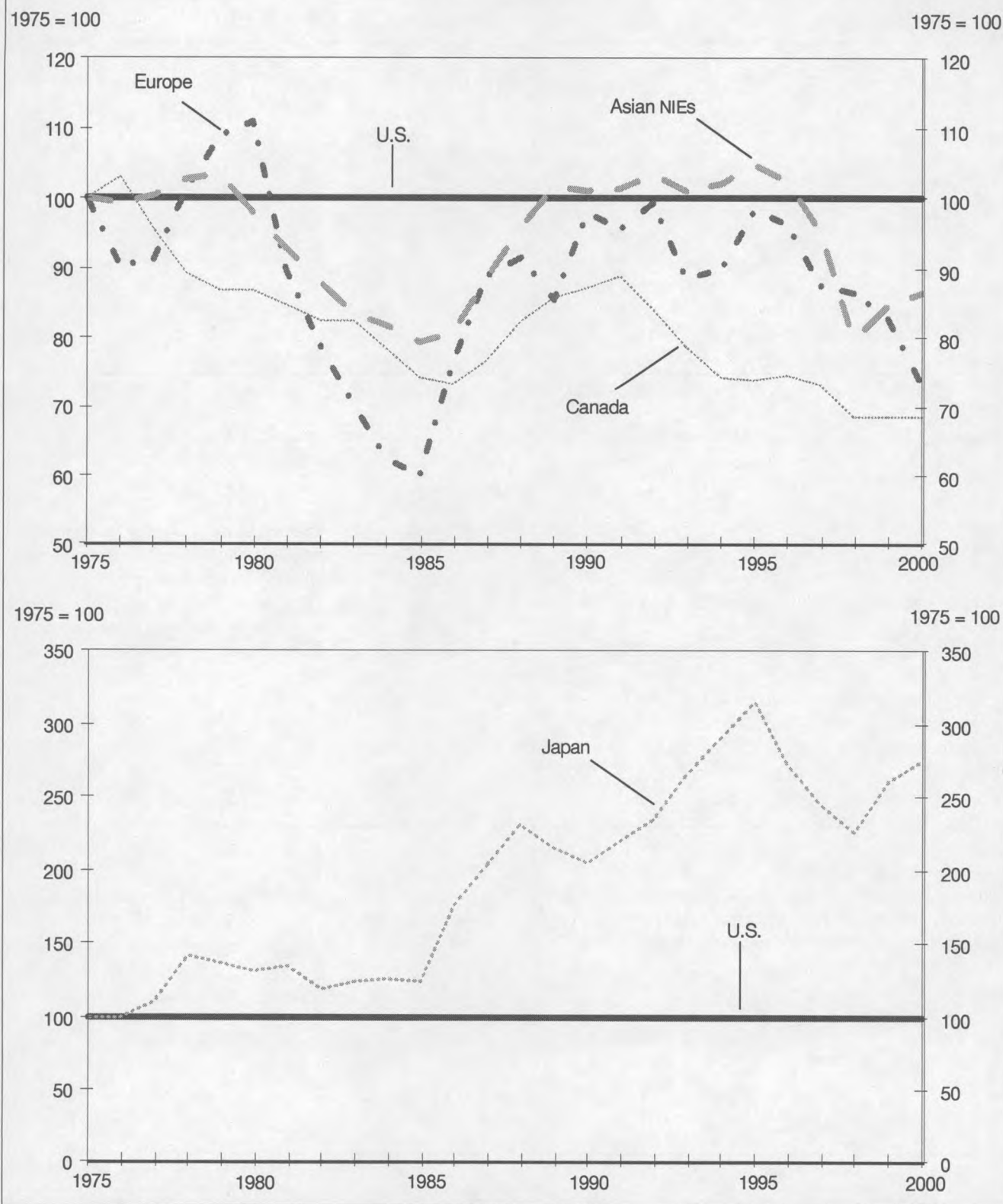
Strong growth against the dollar between 1985 and 1990, however, nearly offset the weak performance in the first half of the decade. The net result was that, over the entire decade of the 1980s, exchange rates in Europe declined only slightly against the dollar. In addition, the higher growth rate in national currency costs relative to the United States over the decade, combined with only a moderate decline in the value of the European currencies, drove European costs 16 percent higher than U.S. costs in 1990—a significant increase from 1980, when U.S. and European costs were at the same level.

European exchange rates in 1995 were essentially unchanged from their 1990 levels. European national currency costs, however, were growing at a rate of 1-1/2 percentage points faster than U.S. costs so that, by 1995, European hourly compensation costs in U.S. dollars were 28 percent higher than U.S. costs.

European exchange rates reversed their course beginning in 1996, declining against the dollar in each year between 1996 and 2000.[12] With national currency growth rates slowing in Europe to about the same rate of growth as in the United States, the exchange rate changes brought European costs relative to the United States down to a level lower than the United States in 2000.

In Japan, growth in national currency compensation costs was more moderate than in the other countries and areas considered. Average growth during the 25-year period was 0.7 percentage points lower than U.S. growth. Costs grew at an average of only 5.5 percent over the 1975–85 time period, the lowest of any country, including the United States. This was a remarkably low rate of growth considering that growth rates for all economies were at their peaks during that period.

Japanese cost growth slowed in subsequent periods, and only the United States had a lower growth rate over the 1985–95 period. Between 1995 and 2000, Japanese compensation costs grew at the lowest rate of any of the competitors. In 1999 and 2000, Japanese costs actually declined on a national currency basis while costs in the other competitors continued to grow.

The composition of Japanese compensation has undergone an important change in the past 25 years. Bonuses, which make up a large portion of total compensation in Japan, have been falling as a percentage of total compensation since 1975, when they comprised 19.6 percent of compensation costs. Since that time they have fallen 4.5 percentage points. The following tabulation shows bonuses and social insurance as a percentage of total compensation in Japan:

	Bonuses	Social Insurance
1975	19.6	9.9
1980	18.6	11.4
1985	17.6	12.6
1990	18.3	13.5
1995	16.7	14.7
2000	15.1	16.0

In contrast to the relative decline in bonuses in Japan, the share of social insurance expenditures rose steadily over the last quarter-century. In 1975, social insurance expenditures accounted for just about 10 percent of total compensation costs, but since that time they have grown 6 percentage points. Social insurance in Japan now has an importance as high as Canada and several European countries.

With national currency costs growing at a moderate rate, it was predominantly the increase in the value of the yen relative to the dollar that was responsible for Japan having compensation costs higher than the United States in 2000. (See chart 6.) Japan was the only foreign economy with a currency that was stronger against the dollar in 2000 than in 1975, and the only currency that appreciated in both 1975–85 and 1985–95.

During 1985–95, the strength of the yen pushed Japanese compensation costs well above costs in the Unites States. However, the latter part of the 1990s saw a reversal in the Japanese exchange rate trend, as the yen weakened for 3 consecutive years. This downward trend lowered Japanese compensation costs to about the same level as U.S. costs in 1998. (See chart 4.) But the yen rebounded strongly in 1999 and 2000, causing the rise of Japanese compensation costs above U.S. costs once again.

Unlike Japan, growth in national currency compensation costs was the major factor that determined the trend in compensation costs for the Asian NIEs relative to the United States between 1975 and 1995. While costs in national currency were growing at double-digit rates, exchange rates were nearly the same in 1995 as in 1975. Thus, the sharp increase in compensation costs on a U.S. dollar basis in the NIEs through 1995 can be attributed nearly entirely to fast growth in national currency compensation costs.

Those national currency growth rates followed the same general slowing pattern in the Asian NIEs as in most of the other foreign economies, but the deceleration took place from a higher growth level. Despite compensation cost growth rates that fell nearly 4 percentage points from the 1975–85 time period to the 1985–95 time period, growth still remained in the double digits in the latter period. Costs then fell another 6 percentage points in the 1995–2000 period, but the rate of growth was still higher than any other competitor except Mexico.

Two factors in particular contributed to the fast pace of hourly compensation cost growth in the NIEs. First, costs in Korea grew faster than the other NIEs throughout the 1975–2000 time period, growing at a rate of 17.7 percent, compared to a trade-weighted average of 9.7 percent for the other three NIEs. Second, social insurance costs as a percentage of compensation costs have been increasing in the NIEs. After falling to a low of 7.8 percent of compensation costs in 1987, social insurance costs rose fairly consistently throughout

the 1990s, and by 2000 made up 14.5 percent of compensation costs.[13] The following shows social insurance as a percentage of total compensation for Asian NIEs:

1975	9.1
1980	9.9
1985	11.3
1987	7.8
1990	9.5
1995	12.2
2000	14.5

While exchange rate changes played a secondary role during most of the period studied, the Asian currency crisis in 1997–98 was a turning point in exchange rate trends in the NIEs. With the exception of Hong Kong, where the currency is pegged to the U.S. dollar, the value of NIEs currencies fell 25.7 percent during the crisis. Combined with slower cost growth on a national currency basis, costs in these countries dropped in 1997 and 1998, when measured in U.S. dollars. (See chart 1.) In 1999 and 2000, these costs recovered somewhat, but failed to reach their pre-crisis levels.

Exchange rates played an important role in the competitive position of Canada. The Canadian dollar steadily depreciated from 1975 to 2000 and, compared with the other competitors, fluctuations in the Canadian currency were modest. On a national currency basis, social insurance in Canada assumed a rising importance over the 25-year period, rising to 16.4 percent of total compensation costs in 2000, up from 8.9 percent in 1975. Altogether, Canadian national currency costs grew at a rate 1 percentage point higher than the United States between 1975 and 2000, but the cumulative effect of the declining Canadian dollar more than offset the faster growth. As a result, Canadian compensation costs went to only 81 percent of the U.S. level in 2000, down from 94 percent of the U.S. level in 1975. (See table 1).

In Mexico, national currency growth rates were substantially higher than for the other competitors throughout the period studied, growing at more than 30 percent per year between 1975 and 2000. However, the Mexican peso was hard hit by adverse economic shocks that led to several devaluations over the past quarter-century. In 1982, the peso was devalued coinciding with a debt crisis that followed a severe recession and liquidity crisis. In 1986, the peso was further devalued in response to the steep fall in the price of oil, Mexico's main source of export revenue. The latest major devaluation occurred in December 1994, when the peso was permitted to float vis-à-vis the dollar.[14] These events severely impacted the Mexican currency to the point where it was the weakest of any of the competitors.

Chart 7 illustrates the effect of these devaluations on the value of the peso and Mexican hourly compensation costs. Each of the three major devaluations resulted in a drop of more than 40 percent in the value of the peso. As a result, Mexican compensation costs as a percent of the U.S. level (lower panel of chart 7) fell sharply in response to each of these events. The impact of these events on Mexican compensation is overwhelming; since 1980 Mexican costs relative to the United States have fallen only during the immediate aftermath of the devaluations—2 years (1982 and 1986) in which devaluations occurred, and 2 years (1983 and 1995) that followed devaluation years. Otherwise, Mexican costs have held steady or increased in the other 16 years. Nevertheless, hourly compensation costs in Mexico have fallen to only 12 percent of the U.S. level in 2000 from a high of 26 percent.

It is notable that hourly compensation cost growth on a national currency basis increased sharply with the first two major devaluations in 1982 and 1986, while the value of the peso continued to fall at a fairly high rate in the years directly following the devaluations. By contrast, during the last devaluation in 1995, the growth rate of national currency compensation costs increased only moderately, but the weakness in the peso abated much more quickly than following previous devaluations—and compensation costs on a U.S. dollar basis had returned to positive growth by the following year.

Conclusion

Over the past 25 years, the U.S. competitive position with regard to hourly compensation costs has improved relative to competitors, particularly Japan and Europe, despite some deterioration over the final 5 years of the 20th century. Future trends in this area will undoubtedly be closely watched as governments, manufacturers, and worker bargaining associations examine proposals regarding wages, additional compensation costs, worker pension plans, and work time.

These trends in hourly compensation costs in U.S. dollar terms are often heavily influenced in the short-term by exchange rate movements, but it is important to note that over the past 25 years it was the difference in national currency cost growth rates between the United States and competitors—particularly Europe and the Asian NIEs— that most affected the competitive position of the United States. For many years, growth in hourly compensation costs in the United States was lower, on a national currency basis, than most of the competitors, contributing to the improvement of the U.S. competitive position. This trend recently changed, and national currency hourly compensation is now growing at slower rates in many of the competitors than in the United States.

Chart 7. Changes in compensation and value of the peso in Mexico, and Mexican compensation costs relative to the U.S. dollar, 1975–2000

Year-to-year
percent change

Year-to-year
percent change

Mexican hourly compensation costs relative to the United States
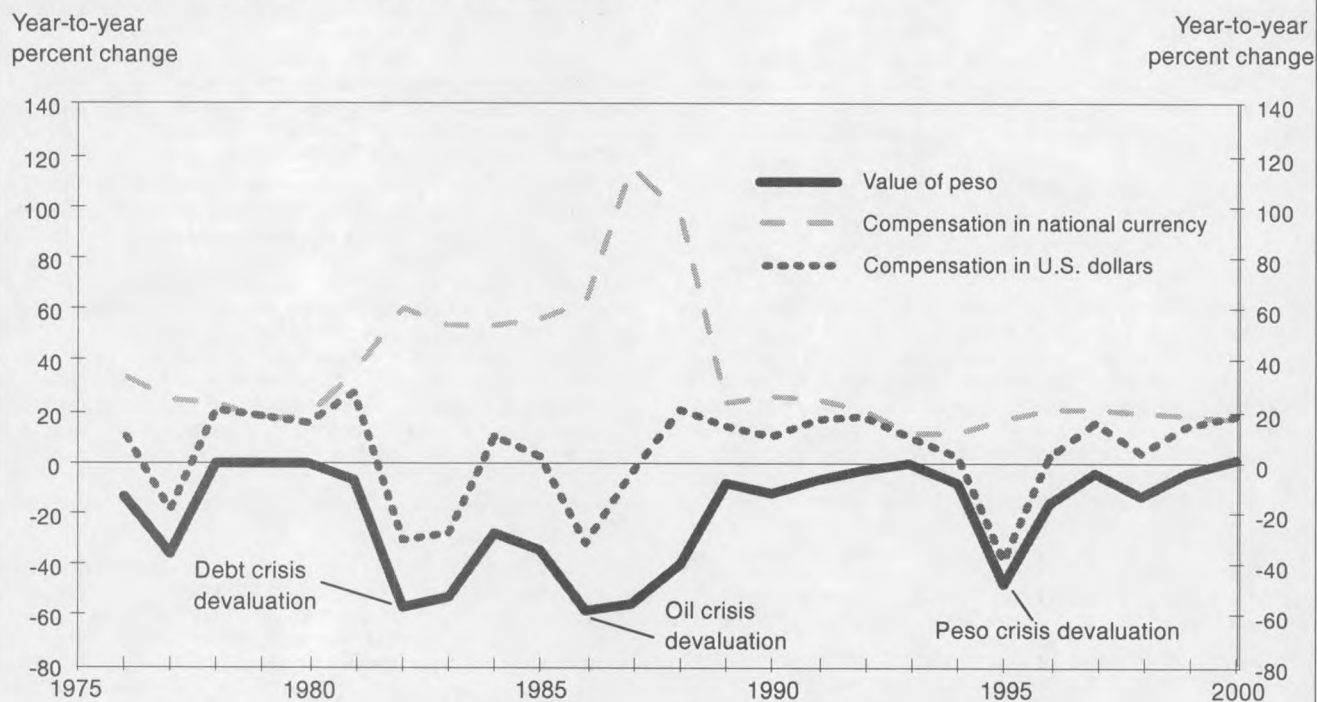
Hourly compensation costs
(U.S. costs = 100)

Hourly compensation costs
(U.S. costs = 100)
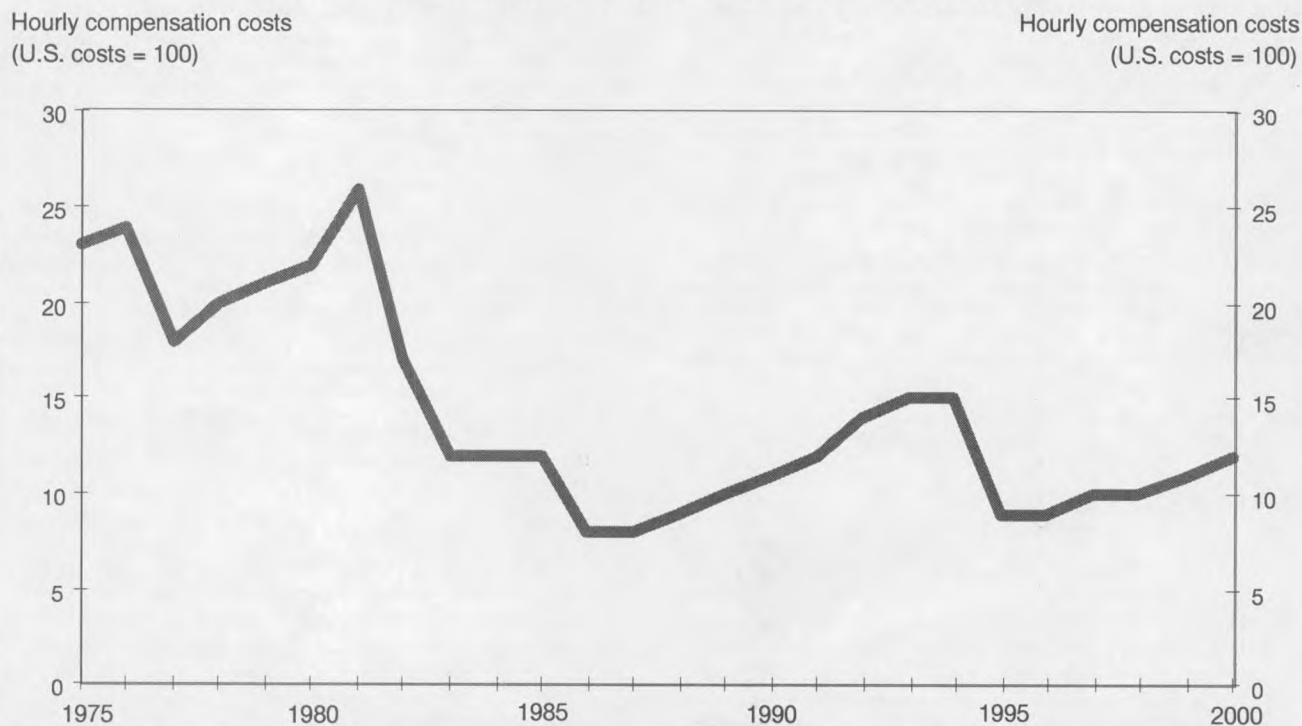
Notes

[1] See, for example, "Manufacturing costs, productivity, and competitiveness, 1979–93," by Edwin R. Dean and Mark K. Sherwood, *Monthly Labor Review*, October 1994, pp. 3–16, for a discussion of input costs, product prices and competitiveness. The offsetting impact on product prices due to productivity gains is discussed in "Labor Productivity in U.S. and Foreign Manufacturing—a Half Century of Comparisons" on p. xx.

[2] "Labor costs—annual update 2001," European Industrial Relations Observatory On-Line.

[3] "EU labour costs 1999," *Statistics in focus*, Population and social conditions, Theme 3, 3/2001.

[4] The Ministers of Finance and Central Bank Governors of five countries (France, Germany, Japan, the United Kingdom, and the United States) met on September 22, 1985, at the Plaza Hotel in New York, in order to review economic developments and policies in their countries. The results of their meeting were summarized in an agreement, known as the "Plaza Accord." In particular, they noted that the "appreciation of the U.S. dollar" was among the factors that have "contributed to large, potentially destabilizing external imbalances among major industrial countries" and that an "appreciation of the main nondollar currencies against the dollar is desirable. They stand ready to cooperate more closely to encourage this when to do so would be helpful." For further information, see the University of Toronto Library and the G8 Research Group at the University of Toronto on the Internet at http://www.library.utoronto.ca/g7/finance/fm850922.htm

[5] The purpose of this article is to decompose the rather distinct speedups and slowdowns in hourly compensation growth rates for the 28 competitors as illustrated in chart 1. There is no attempt to select time periods to eliminate possible cyclical factors.

[6] Europe includes the 15 countries of the European Union, Norway, and Switzerland. For the purposes of constructing a time series for hourly compensation for Europe, data for Germany included in the trade-weighted averages for Europe relate to the former West Germany only. Data for Germany are available only from 1993–2000; no data are available for 1975–92. Approximately 90 percent of manufacturing employment for Germany is in the former West Germany, and the level of hourly compensation in Germany is approximately 4 percent lower than in the former West Germany. Using data for Germany rather than data for the former West Germany would lower the level of European compensation costs by approximately 1 percent.

[7] China is not included because the data needed to construct hourly compensation cost estimates for production workers are not available. Available earnings data are monthly earnings on an all-employee basis; earnings data and hours worked for production workers in manufacturing are not available. In addition, comprehensive surveys on components of compensation not included in earnings are not available.

[8] The international comparisons of compensation costs do not indicate relative living standards of workers or the purchasing power of their income. Prices of goods and services vary greatly among countries, and total compensation costs include not only payments made directly to workers, but also employer payments to funds for the benefit of workers. Many of these payments to funds may benefit the workers only indirectly (as is the case with employer payments for unemployment insurance) or at some point in the future (for example, payments to retirement funds). See the technical appendix on p. xx.

[9] The hourly compensation cost measures used in this article differ from the hourly compensation data in "Comparing 50 years of labor productivity in U.S. and foreign manufacturing" on p. 51 of this issue. Hourly compensation data in that article are calculated from national accounts aggregate employee compensation data and estimates of labor input. In addition, the hourly compensation data used in that article relate to all employees or all employed persons. Only indexes of hourly compensation are calculated; no level data are available. Data in the current article are computed using establishment survey data on average earnings and supplementary labor cost data from periodic labor cost surveys and other data sources. These data relate to production and related workers only. See the appendix on p. 63 of this issue.

[10] Separate data for pay for time worked are not available for Mexico and the Asian NIEs.

[11] Although the trade-weighted average of other direct pay as a percentage of total compensation in Europe is 17 percent, the percentage of other direct pay ranges from just under 10 percent in Ireland to 20 percent or more in Austria, Belgium, and Italy. More information about compensation cost structure in individual European countries can be found in the Supplementary Tables for BLS News Release "International Comparisons of Hourly Compensation Costs for Production Workers in Manufacturing," available on the Internet at http://www.bls.gov/fls

[12] On January 1, 1999, 11 European countries joined the European Monetary Union (EMU): Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain. At the same time, currencies of EMU members were established at fixed conversion rates to the euro, the official currency of the EMU. Exchange rates between the national currencies of EMU countries and the U.S. dollar are no longer reported; only the exchange rate between the euro and the U.S. dollar is available.

[13] The large drop in social insurance in 1987 was primarily the result of a reduction of the rate of employer contributions to the Central Provident Fund (a social security fund) in Singapore. The rate of employer contribution was cut from 25 percent of monthly earnings to 10 percent of monthly earnings effective April 1, 1986.

[14] The exchange rates used in this article are annual averages of daily rates for the entire year. Because this devaluation occurred near the end of 1994, its impact on the annual average of that year was minimized. The full impact of the devaluation is evident in the annual average for 1995, the first full year following the devaluation.

APPENDIX: About the data

The data in this article are hourly compensation costs for production workers in manufacturing. The total compensation measures are prepared by the Bureau of Labor Statistics in order to assess international differences in employer labor costs. Comparisons based on the more readily available average earnings statistics published by many countries can be very misleading. National definitions of average earnings differ considerably; average earnings do not include all items of labor compensation; and the omitted items of compensation frequently represent a large proportion of total compensation.

The compensation measures are computed in national currency units and are converted into U.S. dollars at prevailing commercial market currency exchange rates. The foreign currency exchange rates used in the calculations are the average daily exchange rates for the reference period. They are appropriate measures for comparing

levels of employer labor costs. They do not indicate relative living standards of workers or the purchasing power of their income. Prices of goods and services vary greatly among countries, and commercial market exchange rates are not reliable indicators of relative differences in prices.

Definitions

Hourly compensation costs include (1) hourly direct pay and (2) employer social insurance expenditures and other labor taxes. Hourly direct pay includes all payments made directly to the worker, before payroll deductions of any kind, consisting of (a) pay for time worked (basic time and piece rates plus overtime premiums, shift differentials, other premiums and bonuses paid regularly each pay period, and cost-of-living adjustments); and (b) other direct pay (pay for time not worked—vacations, holidays, and other leave, except sick leave—seasonal or irregular bonuses and other special payments, selected social allowances, and the cost of payments in kind). Social insurance expenditures and other labor taxes include (c) employer expenditures for legally required insurance programs and contractual and private benefit plans (retirement and disability pensions, health insurance, income guarantee insurance and sick leave, life and accident insurance, occupational injury and illness compensation, unemployment insurance, and family allowances); and, for some countries, (d) other labor taxes (other taxes on payrolls or employment—or reductions to reflect subsidies—even if they do not finance programs that directly benefit workers, because such taxes are regarded as labor costs). For consistency, compensation is measured on an hours-worked basis for every country.

The BLS definition of hourly compensation costs is not the same as the International Labour Office (ILO) definition of total labor costs. Hourly compensation costs do not include all items of labor costs. The costs of recruitment, employee training, and plant facilities and service—such as cafeterias and medical clinics—are not included because data are not available for most countries. The labor costs not included account for no more than 4 percent of total labor costs in any country for which the data are available.

Production workers generally include those employees who are engaged in fabricating, assembly, and related activities; material handling, warehousing, and shipping; maintenance and repair; janitorial and guard services; auxiliary production (for example, powerplants); and other services closely related to the above activities. Working supervisors are generally included; apprentices and other trainees are generally excluded.

Methods

Total compensation is computed by adjusting each country's average earnings series for items of direct pay not included in earnings and for employer expenditures for legally required insurance, contractual and private benefit plans, and other labor taxes. For the United States and other countries that measure earnings on an hours-paid basis, the figures are also adjusted in order to approximate compensation per hour worked.

Earnings statistics are obtained from surveys of employment, hours, and earnings or from surveys or censuses of manufactures.

Adjustment factors are obtained from periodic labor cost surveys and interpolated or projected to nonsurvey years on the basis of other information for most countries. The information used includes annual tabulations of employer social security contribution rates provided by the International Studies Staff of the U.S. Social Security Administration, information on contractual and legislated fringe benefit changes from ILO and national labor bulletins, and statistical series on indirect labor costs. For other countries, adjustment factors are obtained from surveys or censuses of manufactures or from reports on fringe-benefit systems and social security. For the United States, the adjustment factors are special calculations for international comparisons based on data from several surveys.

The statistics are also adjusted, where necessary, to account for major differences in worker coverage; differences in industrial classification systems; and changes over time in survey coverage, sample benchmarks, or frequency of surveys. Nevertheless, some differences in industrial coverage remain and—with the exception of the United States, Canada, and several other countries—the data exclude very small establishments (less than 5 employees in Japan and less than 10 employees in most European and some other countries). For the United States, the methods used, as well as the results, differ somewhat from those for other BLS series on U.S. compensation costs.

Hourly compensation costs are converted to U.S. dollars using the average daily exchange rate for the reference period. The exchange rates used are prevailing commercial market exchange rates as published by either the U.S. Federal Reserve Board or the International Monetary Fund.

For further details on survey sources and on special estimation procedures for some countries because of incomplete data, see International Comparisons of Hourly Compensation Costs for Production Workers in Manufacturing, 1995 (Report 909, Bureau of Labor Statistics, September 1996).

Trade-weighted measures

The trade weights used to compute the average compensation cost measures for selected economic groups are relative importances derived from the sum of U.S. imports of manufactured products for consumption (customs value) and U.S. exports of domestic manufactured products (free along side {f.a.s.} value) in 1992 for each country or area and each economic group. The tabulation shows the share of total U.S. imports and exports of manufactured products in 1992:

Country or area	1992 trade share	Country or area	1992 trade share
Canada	19.2	Greece	.1
Mexico	7.6	Ireland	.6
		Italy	2.3
Australia	1.4	Luxembourg	.1
Hong Kong SAR[1]	2.0	Netherlands	1.9
Israel	.8	Norway	.3
Japan	15.8		
		Portugal	.2
Korea	3.4	Spain	.8
New Zealand	.3	Sweden	.8
Singapore	2.4	Switzerland	1.0
Sri Lanka	.1	United Kingdom	4.4
Taiwan	4.4		

Country or area	1992 trade share	Economic group	1992 trade share
Austria	.3	28 foreign	
Belgium	1.5	economies	80.8
Denmark	.3	OECD[3]	71.1
Finland	.2	Europe	23.4
France	3.2	European Union ..	22.1
Germany[2]	5.4	Asian NIES	12.2

The trade data used to compute the weights are U.S. Bureau of the Census statistics of U.S. imports and exports converted to an industrial classification basis from data initially collected under the Harmonized Tariff Schedule commodity classification system.

The Organization for Economic Cooperation and Development (OECD) grouping above includes the countries in this data set that belong to the OECD: Canada, Mexico, Australia, Japan, Korea, New Zealand, and all European countries. Europe as defined for this data set consists of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom. The group labeled "Asian NIES" consists of the four newly industrializing economies of Hong Kong SAR, Korea, Singapore, and Taiwan.

The trade weighted measures relate to all the countries or areas covered in the series. Trade-weighted data for Germany relate to the former West Germany. Estimates are computed for missing country data using the average trend in other economies to estimate the missing data.

The trade-weighted average rates of change are computed as the trade-weighted arithmetic average of the rates of change for the individual countries or areas; the trade-weighted average hourly compensation costs in U.S. dollars are computed as the trade-weighted arithmetic average of cost levels for the individual countries or areas. Rates of change derived from the trade-weighted average hourly compensation cost levels need not be the same as the trade-weighted average rates of change.

Data limitations

Because compensation is partly estimated, the statistics should not be considered as precise measures of comparative compensation costs. In addition, the figures are subject to revision as the results of new labor cost surveys or other data used to estimate compensation costs become available.

The comparative level figures in this article are averages for all manufacturing industries and are not necessarily representative of all component industries. In the United States and some other coun-tries, such as Japan, differentials in hourly compensation cost levels by industry are quite wide. In contrast, other countries, such as Sweden, have narrow differentials.

Labor costs versus labor income

The hourly compensation figures in U.S. dollars provide comparative measures of employer labor costs; they do not provide inter-country comparisons of the purchasing power of worker incomes. Prices of goods and services vary greatly among countries, and the commercial market exchange rates used to compare employer labor costs do not reliably indicate relative differences in prices. Purchasing power parities—that is, the number of foreign currency units required to buy goods and services equivalent to what can be purchased with one unit of U.S. or other base-country currency—must be used for meaningful international comparisons of the relative purchasing power of worker incomes.

Total compensation converted to U.S. dollars at purchasing power parities would provide one measure for comparing relative real levels of labor income. It should be noted, however, that total compensation includes employer payments to funds for the benefit of workers in addition to payments made directly to workers. (For a few countries, the compensation measures also include taxes or subsidies on payrolls or employment even if they do not finance programs which directly benefit workers.) Payments into these funds provide either deferred income (for example, payments to retirement funds), a type of insurance (for example, payments to unemployment or health benefit funds), or current social benefits (for example, family allowances), and the relationship between employer payments and current or future worker benefits is indirect. On the other hand, excluding these payments would understate the total value of income derived from work because they substitute for worker savings or self-insurance to cover items such as retirement and medical costs.

Total compensation, because it takes account of employer payments into funds for the benefit of workers, is a broader income concept than either total direct earnings or direct spendable earnings. An even broader concept would take account of all social benefits available to workers, including those financed out of general revenues as well as those financed through employment or payroll taxes. □

Footnotes to the APPENDIX

[1] Hong Kong Special Administrative Region of China.
[2] Former West Germany.
[3] Organization for Economic Cooperation and Development.

International comparisons

Comparing 50 years of labor productivity in U.S. and foreign manufacturing

*Although manufacturing labor productivity increased less
in the United States than in other G-7 countries over the last
50 years, the growth rate has accelerated in the United States
after 1973, while slowing down in the other countries*

Aaron E. Cobet
and
Gregory A. Wilson

Labor productivity in manufacturing has been a topic of interest throughout recent decades. Research was directed at different issues at different times, depending on economic developments. For example, after 1973, discussion focused on whether there was a historical slowdown in productivity growth in the industrialized countries.[1] Currently, an issue has focused on whether and how the introduction of information technology is affecting manufacturing productivity.[2] In addition, the progressive globalization of the world economy, increasing exposure of individual countries to international trade and capital movements, has heightened interest in productivity, particularly in comparisons among countries. For instance, analysts are examining the relations among labor costs, productivity, prices, and competition.[3]

The Bureau of Labor Statistics international comparisons program began estimating and comparing trends in manufacturing labor productivity and unit labor costs in 1973, making comparisons back to 1950. These accumulated data make it possible to now look at these trends from the perspective of half a century.

Labor productivity in the U.S. manufacturing sector grew continuously over the last half of the 20th century, and this growth accelerated during the 1990s. This is different from most of the other countries in this article, for which productivity

increases slowed over time. The growth in U.S. labor productivity was accompanied by relative stability in manufacturing employment and hours worked, in contrast to most other countries, where manufacturing employment and hours declined. Historically, increases in manufacturing hourly compensation and in unit labor costs have been more moderate in the United States than elsewhere, although, during the 1990s, other countries have succeeded in reducing their hourly compensation and unit labor cost increases to the U.S. rates or below.

In this article, labor productivity is measured as the value of real manufacturing output produced per hour of labor input. Increases in labor productivity reflect the joint effects of many influences, including capital investment, advances in technology, and organizational efficiencies, as well as improved skill levels of the workforce.

Unit labor costs are defined as the cost of labor input required for the production of one unit of output. They are computed as labor compensation in nominal terms divided by real output. Changes in unit labor costs reflect the net effect of changes in hourly worker compensation and in labor productivity. Unit labor costs rise when compensation per hour rises faster than labor productivity. Conversely, if labor productivity rises faster than hourly compensation, unit labor costs decline.

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This article discusses the trends in U.S. manufacturing labor productivity and unit labor costs that have occurred over the half-century 1950–2000, comparing and contrasting these trends with those of the other G-7 countries (Canada, Japan, France, Germany, Italy, and the United Kingdom).[4] Developments in the manufacturing sectors of five other European countries, and of Korea and Taiwan, are also summarized. The data analyzed are from the BLS data on international comparisons, in which U.S. and foreign data are produced according to comparable concepts, definitions, and classifications.[5]

This article first presents an overview of the entire 1950–2000 period, showing the long-term similarities and differences between the manufacturing sectors in the United States and abroad, and contrasting developments during three subperiods: 1950–73; 1973–90; and 1990–2000. The discussion then focuses on each of these three subperiods in turn, examining how changes in labor productivity and labor inputs combined to meet changing demand for output, and explains how changes in manufacturing unit labor costs were in turn the outcome of changes in labor productivity and in hourly compensation rates. The analysis focuses on developments in the U.S. manufacturing sector, contrasting them with developments in other countries. In addition to the three main subperiods, the study also examines developments over certain shorter time periods, whenever this contributes to a better understanding of the underlying trends.

Sometimes, to facilitate comparisons for this analysis, the European members of the G-7 are treated as a unit, and referred to as "Europe G-4." When numerical growth rates are given for "Europe G-4," these are simple arithmetic averages of the respective growth rates for France, Germany, Italy, and the United Kingdom.

Comparative growth varied over time

This study uses BLS comparative time series data for manufacturing labor productivity and related measures. These data are available beginning with 1950 for most of the countries included in this study, with the most recent data available for 2000.

The comparative productivity measures used in this study employ a "value-added" concept of manufacturing output, defined as the value of gross output less the value of all intermediate purchases of goods and services. The value-added data are produced by the statistical agencies of the countries compared, as part of their national accounts. In its system of official productivity measures for the United States, BLS employs a measure of "sectoral" output, which equals the value of gross output less the value of intrasector sales and transfers. In general, measures of "sectoral" output are preferred for industry productivity measurement. Value-added output is used in the present study because the data

are available and because the economies of compared countries differ in size and in the extent of vertical integration of their industries.

Because the comparative value-added series for U.S. manufacturing begin in 1977, for prior years we link the sectoral output series for U.S. manufacturing to the value-added output series at 1977, to create an analytic data set for the 1950–2000 period. It is important to recognize that while these two output series tend to have similar trends over longer periods of time, their growth rates may diverge over shorter time periods. This issue and other aspects of the comparative productivity series and related measures are described more fully in the appendix.

To compare and contrast the changes that have taken place in the competitive position of the United States vis-à-vis the other countries, the 1950–2000 interval has been divided into three periods: the period before 1973; the period between 1973 and 1990; and the most recent decade, 1990–2000. Local cyclical peaks in manufacturing output were reached in 1973 in the United States, Germany, Japan, and the United Kingdom. In Canada, France, and Italy manufacturing output peaked the following year. In addition, 1973 was a cyclical peak for U.S. labor productivity in manufacturing, after many years of continuous productivity growth.

The year 1973 is also a convenient benchmark because certain developments, which had important financial effects on all industrial economies, occurred during that year. One development was the end of the Bretton Woods system of controlled exchange rates and the introduction of floating exchange rates. Another development was the first of two major oil price shocks of the 1970s. The U.S. dollar appreciated strongly against most currencies after the second oil price shock in 1979. Then in 1985, as a result of the "Plaza Accord," the dollar began a decade of major weakness.[6] One consequence of the events of 1973 and 1979 was instability in the foreign exchange markets, causing sudden shifts in comparative production costs among countries. Another consequence was that the industrial economies were subjected to inflationary pressures, and manufacturing productivity increases slowed in most countries.

Five of the G-7 countries reached local peaks in manufacturing output between 1989 and 1991. The U.S. manufacturing output peaked in 1988, however the total economy reached a cyclical peak in 1990. In 2000, the terminal year of the comparative series, labor productivity reached its highest level in all G-7 countries, and output reached its highest level in all countries except Germany. Hours worked were at the lowest levels in Germany, France, and the United Kingdom. On foreign exchange markets, several years of relative stability began after 1990, following the U.S. dollar weakness in the second half of the 1980s. (A separate examination of the 1990s makes it possible to focus on the

trends that determine the current comparative position of the U.S. manufacturing sector.)

Overview, 1950–2000

During the last half of the 20th century, labor productivity in the manufacturing sector increased less in the United States than in the other G-7 countries—Canada, Japan, and Europe G-4 (France, Germany, Italy, and the United Kingdom). (See table 1; definitions of the measures presented in table 1 and in subsequent tables can be found in the appendix.) This slower overall growth in U.S. productivity is largely attributable to the pre-1973 period, when manufacturing productivity rose considerably more in the other regions than in the United States. (See chart 1, panel 1.) After 1973, growth in U.S. productivity continued and even accelerated, whereas productivity growth slowed in most other countries.

The pattern across time of U.S. productivity increases differed from that of the other countries. The U.S. productivity growth rate was relatively stable over the different time periods and subperiods covered by this study, and reached its maximum in the 1990s. The remaining G-7 countries, however, experienced their highest rates of productivity increases during the pre-1973 period, followed by considerably lower rates of growth in subsequent years. The one exception was the United Kingdom, where productivity growth remained relatively stable over the entire 50-year period.

All of the G-7 countries except the United States had their largest increases in manufacturing output during the 1950–73 period. As was the case in other countries, U.S. output growth slowed after 1973, but then it grew faster after 1990, regaining and even surpassing its pre-1973 growth rate. In the other countries, the output growth rate continued to slow after 1990, or made only a partial recovery. (See chart 1, panel 2.)

U.S. manufacturing employment, as well as average and total hours worked, remained relatively stable during the last half of the 20th century, compared with Japan and Europe G-4. (See chart 1, panels 3 and 4.) Manufacturing employment in the United States increased before 1973, then declined slowly afterwards. This resulted in a small net gain in employment and total hours between 1950 and 2000. As in the United States, employment in Europe G-4 grew before 1973, but employment and hours fell much more steeply after 1973. A similar pattern developed in Japan, where manufacturing employment grew rapidly before 1973, but then stagnated and declined, falling rapidly after 1990. Canada was the only G-7 country to experience growth in manufacturing employment during each of the three periods.

Over the entire 1950–2000 period, U.S. manufacturing unit labor costs increased less than those of most other countries, measured in national currencies. The greatest differences, however, occurred in the period after 1973 and before 1990.

(See chart 1, panel 6.) Before 1973, unit labor costs in U.S. manufacturing increased at an annual rate which was within 2 percentage points of the growth rates in the other G-7 countries. But during the following period, 1973–90, U.S. unit labor costs grew markedly more slowly than unit labor costs in most other G-7 countries. The U.S. unit labor cost increases during this period were particularly modest when compared with unit labor cost increases in the average of Europe G-4 countries, some of which were almost double the U.S. rate. After 1990, unit labor cost growth slowed in all G-7 countries, and the difference between the U.S. increases and those of the other G-7 countries was, again, comparatively small.

Modest hourly compensation increases were the main reason for the moderate growth in U.S. manufacturing unit labor costs.[7] Over the entire 1950–2000 interval, hourly compensation increased in all countries and all periods compared, however the U.S. increases were, on the whole, more moderate (table 1). The U.S. average hourly compensation growth rate was markedly below the hourly compensation growth rates in Japan and the Europe G-4 countries. Among the major competitor countries, some had lower hourly compensation growth rates than the United States, but only during certain subperiods. Overall, labor productivity was less important, and hourly compensation more important in limiting unit labor cost increases in U.S. manufacturing than they were in the other countries.

Currency fluctuations played an important role in determining comparative trends in unit labor costs denominated in U.S. dollars during some periods, especially after 1973, when the Bretton Woods system of controlled exchange rates was replaced by floating exchange rates. The effect on U.S. competitiveness was positive or negative, depending on the period. Looking at trends in unit labor costs denominated in U.S. dollars over the entire 50-year period, one can see that the average U.S. increases were smaller than, or the same as, unit labor cost increases in the other countries (table 1).

Comparative trends of labor productivity and unit labor costs from 1950 to 2000 are summarized in charts 2 and 3. In these charts, indexes of manufacturing output per hour and of dollar-denominated unit labor costs (with 1973 = 100, for each of Europe G-4, Japan, and Canada) are divided by the corresponding index for the United States. (Japanese data begin with 1955.)

The slope of each line at a given year indicates the relative growth rates of the underlying measure. When the slope is rising, it means that the measure in the given country or region is growing faster, or declining more slowly, than the corresponding measure in the United States. The converse is indicated by a falling slope. The magnitude of the difference in growth rates is shown by the steepness of the slope.

Table 1. Average annual rates of change in manufacturing labor productivity and related measures, G-7 countries, 1950–2000

Period and country	Output per hour	Output	Total hours	Employment	Average hours	Hourly compensation	Unit labor costs National currency	Unit labor costs U.S. dollars	Exchange rate
Total, 1950–2000									
United States	2.9	3.3	0.4	0.4	0.0	5.6	2.6	2.6	...
Canada	3.0	3.9	.8	.9	−.1	6.3	3.2	2.6	−.6
Japan (1955–2000)	6.3	7.1	.8	1.2	−.4	8.3	1.9	4.7	2.7
Europe G-4	4.3	3.6	−.7	−.2	−.5	9.2	4.7	3.7	−.9
France	4.8	3.8	−.9	−.5	−.5	9.1	4.1	2.6	−1.4
Germany	4.7	4.0	−.7	.1	−.8	7.7	2.9	4.3	1.4
Italy	4.5	5.0	.4	.6	−.2	10.5	5.7	3.2	−2.4
United Kingdom	3.2	1.7	−1.5	−1.1	−.3	9.3	6.0	4.7	−1.2
1950–73									
United States	2.6	3.7	1.1	1.2	−.1	5.3	2.6	2.6	...
Canada	4.1	5.5	1.3	1.6	−.3	6.1	1.9	2.3	.4
Japan (1955–73)	10.0	13.8	3.5	4.0	−.4	12.6	2.4	4.1	1.6
Europe G-4	5.5	6.3	.7	1.2	−.5	9.4	3.7	3.8	.2
France	6.0	6.4	.4	.7	−.3	10.1	3.9	2.8	−1.0
Germany	6.9	7.6	.7	1.7	−1.0	9.8	2.7	4.8	2.0
Italy	6.1	7.9	1.7	2.0	−.3	9.7	3.4	3.7	.3
United Kingdom	3.3	3.1	−.2	.2	−.4	8.0	4.6	4.0	−.6
1973–90									
United States	2.8	2.5	−.3	−.3	.0	7.1	4.1	4.1	...
Canada	2.1	2.0	−.1	.0	−.1	8.8	6.5	5.5	−.9
Japan	4.1	3.9	−.2	.1	−.3	7.4	3.2	7.1	3.7
Europe G-4	3.4	1.6	−1.7	−1.2	−.6	11.9	8.2	6.9	−1.1
France	3.6	1.5	−2.1	−1.4	−.7	11.3	7.4	6.1	−1.2
Germany	2.9	1.4	−1.5	−.6	−.8	6.8	3.9	6.9	2.9
Italy	3.8	3.2	−.6	−.4	−.2	15.4	11.2	6.5	−4.2
United Kingdom	3.3	.3	−2.9	−2.4	−.5	13.8	10.2	8.2	−1.9
1990–2000									
United States	4.0	3.8	−.2	−.4	.2	3.7	−.2	−.2	...
Canada	2.1	3.3	1.2	.9	.3	2.9	.8	−1.6	−2.4
Japan	3.6	1.0	−2.5	−1.7	−.7	2.4	−1.2	1.8	3.0
Europe G-4	3.1	1.1	−1.9	−1.7	−.2	4.3	1.2	−1.9	−3.1
France	4.2	2.0	−2.1	−1.5	−.6	3.3	−.8	−3.4	−2.6
Germany	3.0	.3	−2.6	−2.5	−.1	4.5	1.5	−1.2	−2.7
Italy	2.3	1.4	−.9	−.7	−.2	4.5	2.2	−3.4	−5.4
United Kingdom	2.8	.7	−2.0	−2.1	.1	5.0	2.1	.5	−1.6

The 1950–73 period

Output, labor input, and labor productivity. All the G-7 countries recorded growth in manufacturing output, labor productivity, and employment during the 1950–73 period. (See table 1.) This was a period in which major productivity gains were accompanied by output gains rather than reductions in labor input. Indeed, all countries experienced employment growth, and only the United Kingdom recorded a decline in hours worked.

Between 1950 and 1973, manufacturing labor productivity and output increased less in the United States than in Canada, Japan, and the average of Europe G-4. In fact, the United States was the only country that did not have its highest output growth rates during the pre-1973 years. Japan achieved growth in manufacturing productivity that averaged 10.0 percent per year and posted output gains of 13.8 percent

per year—by far its highest rates of productivity and output growth among the periods compared. Similarly, Canada and Europe G-4 experienced their highest rates of productivity and output growth during this period.

During 1950–73, total manufacturing hours worked increased in all the G-7 countries except the United Kingdom, as a direct result of increased employment, because average hours declined everywhere. The increases in manufacturing employment ranged from a high of 4.0 percent per year in Japan to a low of 0.2 percent per year in the United Kingdom. Most countries also experienced their fastest declines in average hours worked during this period, but average hours worked in U.S. manufacturing declined less than elsewhere. Employment in the United States and in Europe G-4 grew at the same rate before 1973. However, this employment growth was offset by bigger declines in average hours worked in Europe G-4, so that total hours worked in Europe G-4

Chart 1. **Productivity, unit labor costs, and related measures in manufacturing, G-7 countries, 1950–2000**

Average
annual growth
rates (percent)

Panel 1. Productivity

- 1950–73
- 1973–90
- 1990–2000

16
14
12
10
8
6
4
2
0

United States[1]   Canada   France   Germany   Italy   United Kingdom   Japan
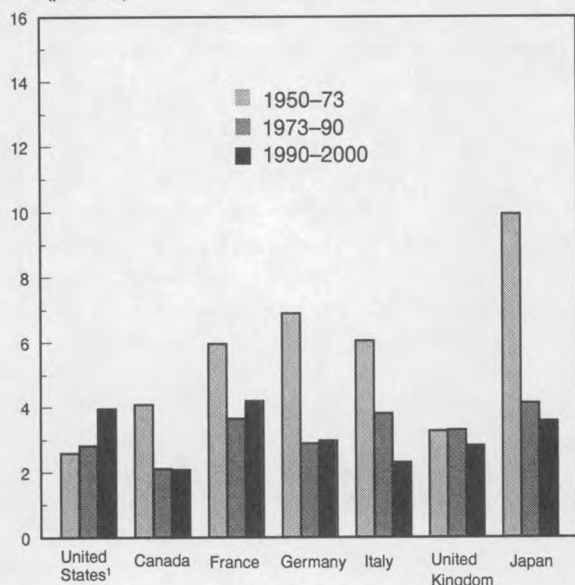
Average
annual growth
rates (percent)

Panel 2. Output

- 1950–73
- 1973–90
- 1990–2000

16
14
12
10
8
6
4
2
0

United States[1]   Canada   France   Germany   Italy   United Kingdom   Japan
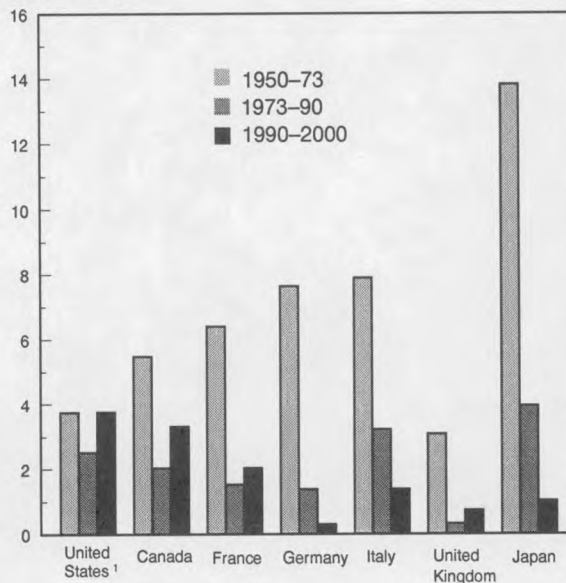
Average
annual growth
rates (percent)

Panel 3. Total hours

- 1950–73
- 1973–90
- 1990–2000

5
4
3
2
1
0
-1
-2
-3

United States   Canada   France   Germany   Italy   United Kingdom   Japan
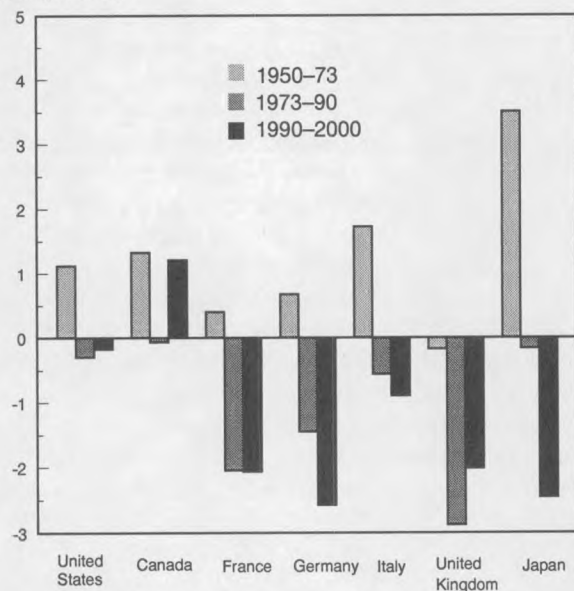
Average
annual growth
rates (percent)

Panel 4. Employment
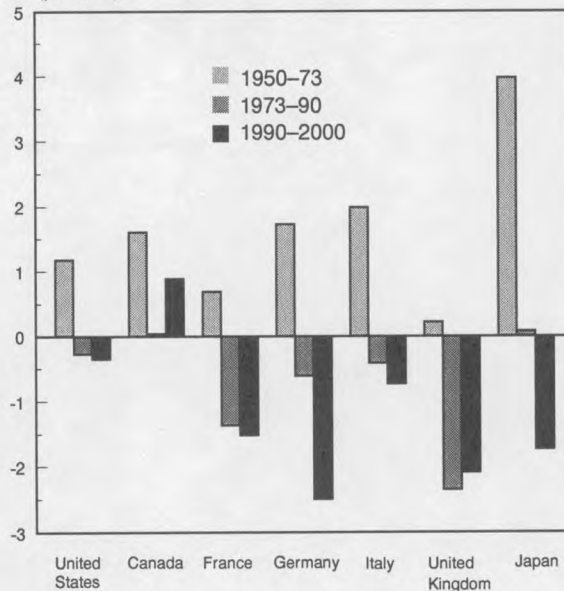
- 1950–73
- 1973–90
- 1990–2000

5
4
3
2
1
0
-1
-2
-3

United States   Canada   France   Germany   Italy   United Kingdom   Japan

[1] The U.S. growth rates shown in panels are based on sectoral output for years prior to 1977, and on value- added output for subsequent years.

Chart 1. Continued—Productivity, unit labor costs, and related measures in manufacturing, G-7 countries, 1950–2000

Average annual growth rates (percent)

Panel 5. Hourly compensation

■ 1950–73
■ 1973–90
■ 1990–2000

United States, Canada, France, Germany, Italy, United Kingdom, Japan

Average annual growth rates (percent)

Panel 6. Unit labor costs, national currency

■ 1950–73
■ 1973–90
■ 1990–2000

United States[1], Canada, France, Germany, Italy, United Kingdom, Japan

Average annual growth rates (percent)

Panel 7. Unit labor costs, U.S. dollars

■ 1950–73
■ 1973–90
■ 1990–2000

United States[1], Canada, France, Germany, Italy, United Kingdom, Japan

[1] The U.S. growth rates shown in panels are based on sectoral output for years prior to 1977, and on value-added output for subsequent years.

increased less than those in the United States. In Canada and Japan, however, total hours worked increased more, despite declines in average hours, because manufacturing employment grew more in these two countries than it did in the United States. In Japan, for example, total hours grew at a rate 3.5 percent per year, due to employment growth of 4 percent per year, which swamped a decline in average hours of 0.4 percent per year.

Hourly compensation and unit labor costs. Before 1973, the average rate of unit labor cost growth in the United States was 2.6 percent per year, which was below the growth rates of most of the other G-7 countries, expressed in their national currencies. (See table 1.) Only Canada, Japan, and Germany had unit labor cost increases similar to or lower than the rate for the United States. However, the factors which resulted in these relatively moderate unit labor cost increases differed among these four countries. Modest hourly compensation increases were the main reason for the moderate growth in U.S. unit labor costs during this period. Before 1973, the hourly compensation increase in U.S. manufacturing was the lowest among the G-7 countries, at 5.3 percent per year. Only Canada experienced hourly compensation increases roughly close to the United States, whereas hourly compensation in the European countries and in Japan grew much more. In Japan and Germany, high hourly compensation growth rates were offset by high productivity growth rates. Both hourly compensation and productivity growth rates in these two countries were considerably higher than the rates in the United States. For example, Japan's hourly compensation growth before 1973 was more than twice the U.S. rate, but its productivity gains were almost four times those of the United States. Unit labor costs increased more in the other European countries, because those countries were unable to match rising hourly compensation with adequate productivity gains.

Comparing unit labor cost trends during this period in U.S. dollars, the United States was able to improve its competitive position against all countries except Canada. Although Japan's and Germany's unit labor cost increases (denominated in their national currencies) were similar to or lower than the U.S. increases, their strong currency appreciation raised their unit labor costs denominated in U.S. dollars considerably, weakening their competitive positions. Exchange rate movements had only a minor impact on the unit labor costs of the other countries during this period.

The 1973–90 period

Output, labor input, and labor productivity. The period following 1973 was characterized by inflationary pressures, including large increases in hourly compensation in manufacturing, and by a slowdown in manufacturing output.

Chart 2. **Manufacturing labor productivity in foreign countries relative to that in the United States, 1950–2000**

Ratio: Competitors/United States (1973 = 1.00)

(1973 = 1.00)

Canada

Europe G-4

Japan
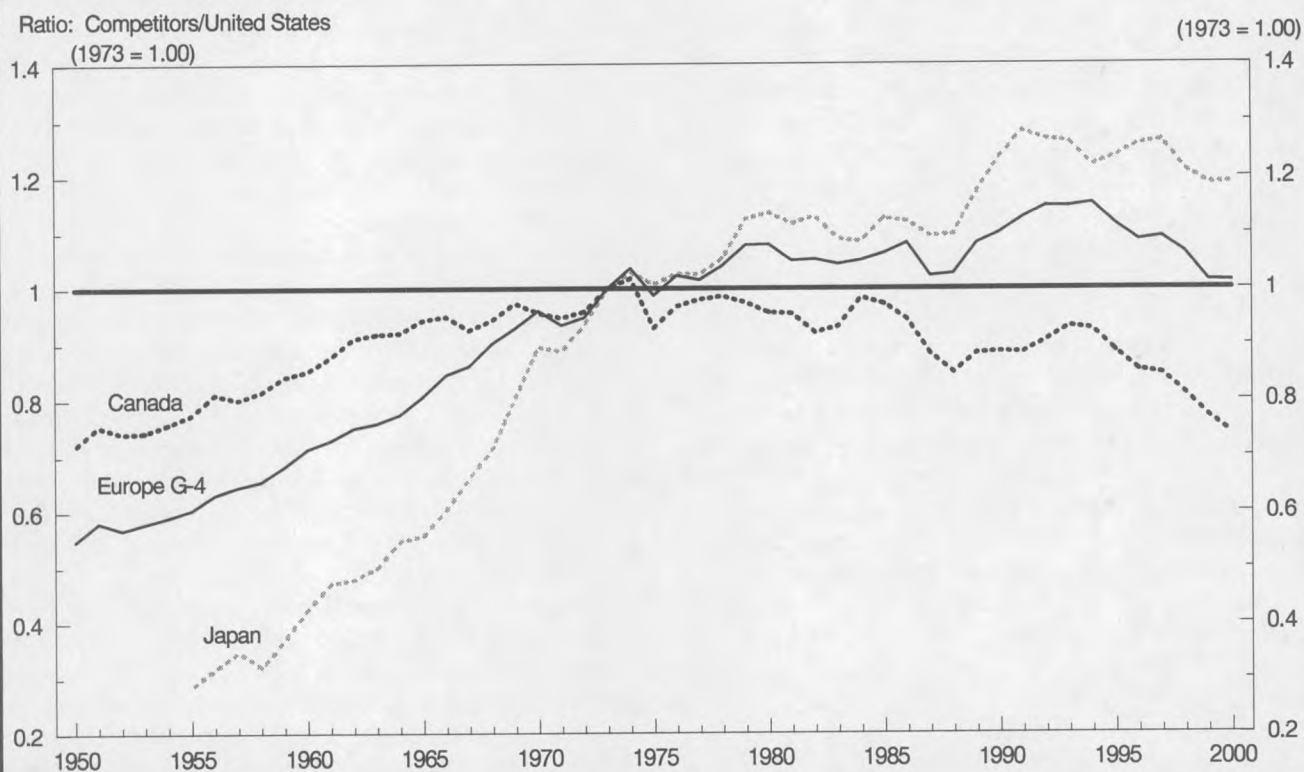
Chart 3. **Manufacturing unit labor costs in foreign countries, relative to those in the United States, 1950–2000 (U.S. dollar basis)**

Ratio: Competitors/United States (1973 = 1.00)

(1973 = 1.00)

Canada

Europe G-4

Japan
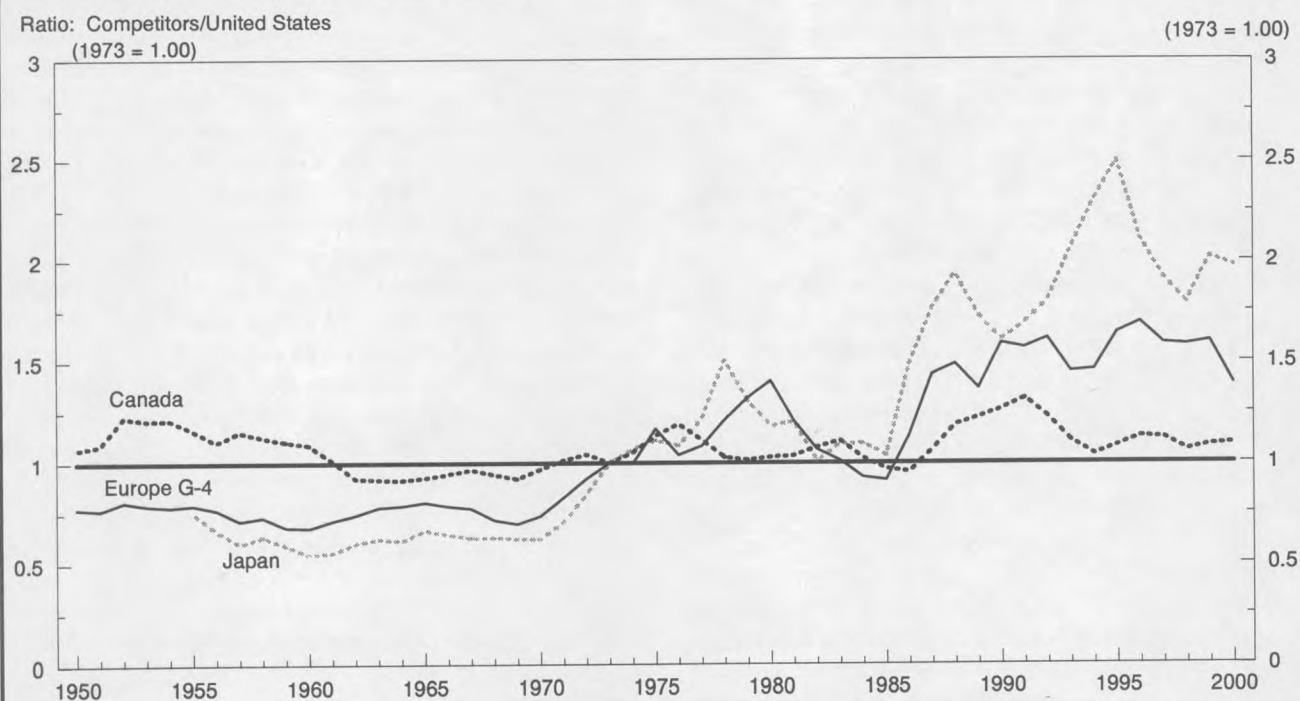
Also during this period, manufacturing employment and hours worked stopped growing and then declined in all regions.

After 1973, U.S. manufacturing productivity continued to increase at roughly the same rate as in the earlier period, as was the case in the United Kingdom. In comparison, the rate of productivity growth fell noticeably in the other G-7 countries during this period.[8] Labor productivity grew by 2.8 percent per year on average in the United States over the entire 1973–90 period, which was still below the corresponding growth rates in Japan and Europe G-4 (table 1). The German and Japanese productivity increases of the 1973–90 period were less than half of their pre-1973 average annual growth rates.

Manufacturing output growth slowed in each of the regions compared, during the 1973–90 period. (See chart 1, panel 2.) The U.S. output growth rate slowed by more than 1 percentage point, but Japan and Europe G-4 experienced pronounced slowdowns in output growth after 1973. In Japan, the manufacturing output growth rate declined by 10 percentage points and in Europe G-4 the output growth rate fell by almost 5 percentage points. Among the Europe G-4 countries, Germany experienced the sharpest slowdown in output growth—falling from 7.6 to 1.4 percent per year. Furthermore, the output growth rate in Canada slowed by 3-1/2 percentage points.

The slowdown in manufacturing output among the G-7 countries was accompanied by declines in total hours worked (table 1). In the United States, total hours worked in manufacturing fell by 0.3 percent per year during the 1973–90 period, due to a slight fall in employment and no change in average hours worked. In contrast, the decline in total hours in Europe G-4 was due to decreases in employment and declines in average hours worked. The average annual rates of decline of employment among the Europe G-4 countries ranged from 0.4 percent in Italy to 2.4 percent in the United Kingdom. As a result, by 1990, manufacturing employment was 7 percent below its 1973 level in Italy, and 33 percent below the 1973 level in the United Kingdom. This fall in employment was accompanied by a steady decline in average hours worked, resulting in an average decline in total hours worked in Europe G-4 of 1.7 percent per year between 1973 and 1990. Total hours worked also fell in Japan, even though Japan was the only G-7 country to experience employment growth during this period, because average hours worked decreased more than employment increased. Total hours worked in Canada also declined due to a fall in average hours worked combined with stagnating employment.

Within the 1973–90 interval, three subperiods deserve special attention: 1973–79, 1979–85, and 1985–90. At the end of the first subperiod, 1979, the United States, Canada, France, and Germany, reached local cyclical peaks in manufacturing output. Also in that year, the Iranian revolution erupted,

followed by a sharp increase in the price of crude oil —126 percent. After 1979, the U.S. dollar strengthened against most other currencies. The second subperiod, 1979–85, ended with the "Plaza Accord," which included an international agreement to lower the value of the U.S. dollar. As a result, most currencies strengthened against the dollar during the third subperiod, 1985–90. Exchange rates are a major factor in determining unit labor costs denominated in U.S. dollars, and therefore directly affect the international competitiveness of a country's manufactures.

Output, hours, and productivity trends in manufacturing varied among the three subperiods of the 1973–90 interval. U.S. manufacturing output grew at approximately the same rate in each of three subperiods examined, ranging between 2 percent and 3 percent per year. (See table 2.) In contrast, two European countries experienced a drop in output during some of the subperiods, reducing their overall output growth. In the United Kingdom, output fell during the first two subperiods (1973–79, 1979–85) before rebounding during the third subperiod (1985–90). Output in France fell in the second subperiod (1979–85).

The United States experienced moderate employment growth during the first subperiod (1973–79) followed by declines in employment during the second and third periods (1979–85, 1985–90). Japan had the opposite experience, its employment falling during the first subperiod followed by employment growth during the second and third subperiods (table 2). France and the United Kingdom experienced a drop in employment in all three subperiods.

Hourly compensation and unit labor costs. During 1973–90, U.S. unit labor costs rose by 4.1 percent per year—faster by more than a third from the preceding period—due to larger hourly compensation increases that were not accompanied by faster productivity growth. (See chart 1, panel 6.) Still, the U.S. increase in unit labor costs was smaller than the increase for most G-7 countries, when measured in national currency units. The average annual increases in unit labor costs of the other G-7 countries more than doubled during this period, so that the U.S. increases were noticeably smaller by comparison. Only the two countries that had been able to reduce the rate of their hourly compensation increases during this time period—Germany and Japan—had smaller increases in manufacturing unit labor costs (table 1).

In the 1973–90 period, which was marked by high inflation following the first and second oil crises, hourly compensation increases accelerated considerably in most countries. Nevertheless, the spurt in U.S. manufacturing hourly compensation increases was among the most moderate. Most competitors experienced greater increases in hourly compensation, especially Italy and the United Kingdom (table 1). Only two countries, Germany and Japan, were able

Table 2.	Average annual rates of change in manufacturing labor productivity and related measures, G-7 countries, selected periods, 1973–90								
Period and country	Output per hour	Output	Total hours	Employment	Average hours	Hourly compensation	Unit labor costs		Exchange rate
							National currency	U.S. dollars	
1973–79									
United States	2.6	2.9	0.3	0.8	−0.4	9.7	6.9	6.9	...
Canada	2.1	2.3	.2	.5	−.3	12.4	10.0	7.2	−2.6
Japan	4.6	2.5	−2.0	−1.6	−.4	12.8	7.8	11.8	3.7
Europe G-4	3.8	2.3	−1.5	−.6	−.9	16.6	12.4	11.9	−.3
France	4.5	2.6	−1.8	−.9	−1.0	15.8	10.9	11.6	.7
Germany	4.2	1.7	−2.4	−1.6	−.8	9.2	4.8	11.4	6.3
Italy	5.3	5.5	.2	1.4	−1.1	22.0	15.9	9.2	−5.8
United Kingdom	1.1	−.7	−1.8	−1.4	−.5	19.4	18.1	15.3	−2.4
1979–85									
United States	3.5	2.2	−1.2	−1.4	.2	7.2	3.6	3.6	...
Canada	3.4	1.9	−1.5	−1.3	−.2	9.1	5.5	2.8	−2.5
Japan	3.5	4.7	1.1	1.2	.0	4.7	1.1	−.3	−1.5
Europe G-4	3.3	−.1	−3.2	−2.6	−.7	11.7	8.2	−2.7	−10.0
France	3.0	−.4	−3.3	−2.3	−1.0	12.8	9.5	−3.3	−11.7
Germany	2.1	.2	−1.9	−1.1	−.8	6.0	3.8	−4.1	−7.6
Italy	3.5	.9	−2.5	−2.3	−.1	15.9	12.0	−2.5	−12.9
United Kingdom	4.4	−1.2	−5.3	−4.6	−.8	12.2	7.5	−1.0	−7.9
1985–90									
United States	2.4	2.5	.0	−.1	.1	3.9	1.4	1.4	...
Canada	.5	1.8	1.3	1.2	.1	4.2	3.7	7.0	3.2
Japan	4.3	4.8	.5	.8	−.3	4.6	.3	10.8	10.5
Europe G-4	3.1	2.9	−.2	−.2	.0	6.6	3.3	13.5	9.9
France	3.4	2.6	−.8	−.9	.1	4.5	1.0	11.6	10.5
Germany	2.1	2.3	.2	1.1	−.9	5.0	2.8	15.9	12.7
Italy	2.4	3.2	.8	−.2	1.0	7.4	4.8	15.1	9.8
United Kingdom	4.6	3.4	−1.2	−.9	−.3	9.4	4.5	11.4	6.6

to resist this trend, and to lower their hourly compensation growth rates. The hourly compensation growth rate in the Japanese manufacturing sector declined by more than a third from its pre-1973 growth rate. (See chart 1, panel 5.)

These high hourly compensation growth rates decelerated markedly after 1979, however. Between 1973 and 1979, manufacturing hourly compensation in the G-7 countries increased by an average of 14.5 percent per year. This rate first slowed to 9.7 percent per year between 1979 and 1985, and then to 5.6 percent per year between 1985 and 1990 (table 2). In all three subperiods of the 1973–90 interval, U.S. manufacturing hourly compensation increased less than those of its major competitors, with the exception of Germany, in the 1973–85 period, and Japan, in the 1979–85 period. For all G-7 countries, the biggest increases in unit labor costs occurred between 1973 and 1979 (table 2). By the third period, 1985–90, unit labor cost increases for most countries had slowed down to rates lower than those in the 1950–73 period.

Wide currency exchange rate fluctuations between 1973 and 1990 had a significant impact on unit labor costs denominated in U.S. dollars. The influence of currency fluctuations was especially important in the 1979–85 period, when the U.S. dollar appreciated strongly against most currencies, temporarily improving the competitive position of foreign manufacturers. Changes in currency values also had a major impact during the 1985–90 period, when the U.S. dollar depreciated sharply, thus reversing the competitive positions. Overall, after taking currency exchange rate movements into account, U.S. unit labor costs increased less than the unit labor costs in any other country during the 1973–90 period (table 1).

The 1990–2000 period

Output, labor input, and labor productivity. Manufacturing labor productivity grew at a higher rate in the United States than in Canada, Japan, and the average of Europe G-4, during the 1990s (table 1). In fact, U.S. manufacturing productivity attained its highest growth rates during the 1990s, increasing at an average annual rate of 4.0 percent. This differs from the remaining G-7 countries, in which the highest productivity increases occurred before 1973. After slowing during the 1973–90 period, labor productivity growth made a partial recovery in Germany and France. However, productivity growth continued to slow in Japan, Italy, and the United Kingdom. (See chart 1, panel 1.) During the decade,

productivity growth was dominated by output increases in the United States and in Canada, and by reduced hours in Japan and in Europe G-4.

Manufacturing output also grew at a faster rate in the United States than in other regions during the 1990s. The U.S. output growth rate during the 1990s exceeded its pre-1973 growth rate. Output growth also partially recovered from the 1973–90 slowdown in Canada, France, and the United Kingdom. In contrast, output growth slowed even further during the 1990s in Japan, Germany, and Italy. (See chart 1, panel 2.) This slowdown was especially dramatic in Japan, where manufacturing output had achieved double-digit growth rates in the years before 1973, but grew at only 1 percent per year after 1990. The rate of output increase was larger in Canada during the 1990s than in Japan and Europe G-4, even though Canadian productivity growth was lower. This was largely due to an increase in total hours worked in Canada, whereas total hours worked declined in Japan and Europe G-4.

Both manufacturing employment and average hours worked declined in 4 of the 7 G-7 countries during the 1990s, with the United States, Canada, and the United Kingdom being the exceptions (table 1). The net result was that total hours worked fell in 6 of the 7 G-7 countries. Only Canada experienced an increase in total hours. The negligible reduction in total hours worked in U.S. manufacturing was smaller than the corresponding decline in the remaining G-7 countries.

This decline in manufacturing employment during the 1990s was a continuation of the decline which began after 1973. The United States, for example, experienced a drop in employment of 0.4 percent per year in the 1990s, slightly faster than the rate during the 1973–90 period. Japan recorded a decline in employment during the 1990s of a similar magnitude as the average for Europe G-4. Canada was the only G-7 country that did not experience a negative growth rate in employment during any of the periods (1950–73, 1973–90, and 1990–2000). (See chart 1, panel 4.)

It has been widely noted that U.S. productivity growth in the manufacturing sector, and in the entire business sector as well, increased more in the latter half of the 1990s than in the earlier part of the decade. Therefore, for this analysis, the 1990s are divided into two 5-year segments. The acceleration in manufacturing productivity did not occur throughout the G-7 countries, however. (See table 3.) Only Japan and France experienced a speed-up of productivity growth in the latter half of the period, and those gains fell short of the 1.3 percentage-point increase experienced by the United States. All of the countries except Italy experienced increases in output growth between the first and second half of the 1990s, but in all of these foreign countries total hours worked grew more, or fell more slowly, than they did in the earlier part of the period.

Hourly compensation and unit labor costs. Unit labor cost growth rates during the 1990s stand in marked contrast to the previous periods studied, because they were by far the lowest, and in some countries unit labor costs declined. This was due primarily to a general slowdown in hourly compensation increases compared with previous periods, although productivity increases also played a part.

The decline in U.S. unit labor costs during this period followed a decline in the hourly compensation growth rate by almost half, and a rise in the productivity growth rate by more than a third from the previous period. Japan and France were the only other countries to also achieve a decline in unit labor costs (table 1). All other competitors experienced only a deceleration in their unit labor cost increases. Although they were able to restrict hourly compensation growth to low levels, their productivity growth rates were lower still. (See chart 1, panel 6.)

In the 1990s, hourly compensation growth in all G-7 countries was slower than that in any previous period in this analysis. Hourly compensation increases in U.S. manufacturing grew by 3.7 percent per year, and in Japan, Canada, and France hourly compensation increased even less (table 1). The other countries experienced slightly larger increases in hourly compensation.

Overall, during the 1990s the U.S. dollar strengthened against the currencies of all the countries except Japan, especially after 1995. In the 1990–95 period, the U.S. dollar appreciated against the currencies of half the countries, but after 1995, the U.S. dollar appreciated against the currencies of all the countries. The result was that unit labor costs in most countries, measured in U.S. dollars, declined more than unit labor costs in the United States, particularly after 1995 (table 3).

Other European countries

Comparable data are available for five non-G-7 European countries: Belgium, the Netherlands, Sweden, Denmark, and Norway. The trends in manufacturing productivity and unit labor costs in these countries over the 1950–2000 period were, on the whole, similar to the corresponding trends in the Europe G-4 countries. (See table 4.) The greatest differences were in Norway.

Denmark, Norway, Sweden, and the Netherlands all achieved their highest manufacturing productivity and output growth rates during the pre-1973 years. However, employment growth was offset by declines in average hours to the point that total hours worked either remained stable or declined in all four countries. Among the Europe G-4 countries, only the United Kingdom experienced a similar decline in total hours during the 1950–73 period.

During the 1973–90 period, manufacturing productivity and output growth slowed in each of the non-G-7 European

Table 3. Average annual rates of change in manufacturing labor productivity and related measures, G-7 countries, selected periods, 1990–2000

Period and country	Output per hour	Output	Total hours	Employment	Average hours	Hourly compensaton	Unit labor costs		Exchange rate
							National currency	U.S. dollars	
1990–1995									
United States	3.3	3.1	−0.1	−0.6	0.4	3.5	0.2	0.2	...
Canada	3.3	2.0	−1.3	−1.5	.3	3.7	.4	−2.8	−3.2
Japan	3.3	.4	−2.8	−1.6	−1.3	3.7	.4	9.5	9.1
Europe G-4	3.6	.6	−2.8	−2.9	.1	5.4	1.8	.7	−1.0
France	4.1	1.1	−2.9	−2.7	−.2	3.7	−.4	1.3	1.8
Germany	3.3	−.7	−3.9	−4.2	.3	6.5	3.0	5.6	2.5
Italy	3.5	1.5	−1.9	−1.8	−.1	6.0	2.4	−3.7	−6.0
United Kingdom	3.3	.5	−2.8	−3.1	.3	5.4	2.0	−.4	−2.4
1995–2000									
United States	4.6	4.4	−.2	−.1	−.1	3.9	−.7	−.7	...
Canada	.9	4.7	3.8	3.4	.4	2.0	1.1	−.5	−1.6
Japan	3.9	1.7	−2.1	−1.9	−.1	1.1	−2.6	−5.3	−2.7
Europe G-4	2.6	1.6	−.9	−.5	−.4	3.3	.7	−4.3	−5.0
France	4.2	2.9	−1.3	−.4	−.9	3.0	−1.2	−8.0	−6.8
Germany	2.6	1.3	−1.3	−.8	−.5	2.6	−.1	−7.6	−7.5
Italy	1.1	1.2	.1	.3	−.2	3.1	1.9	−3.1	−4.9
United Kingdom	2.3	1.0	−1.3	−1.1	−.2	4.5	2.2	1.3	−.8

countries. Employment, average hours, and total hours worked declined in each country. Productivity gains in Belgium, Denmark, the Netherlands, and Sweden corresponded to increases in output and declines in hours worked. This was similar to what occurred in the Europe G-4 countries. Norway, in contrast, achieved a gain in manufacturing productivity even though output declined; hours worked declined at a faster rate than output.

During the 1990s, the growth rate of manufacturing labor productivity in Sweden recovered to nearly its 1950–73 rate. However, productivity growth continued to slow in Belgium, the Netherlands, and Norway. Manufacturing employment continued to decline. Only Norway experienced an overall increase in employment and total hours worked during the 1990s. As was the case with Europe G-4, hourly compensation increases slowed during this period, and unit labor costs went up negligibly or declined in all the countries except Norway.

Korea and Taiwan

Trends of manufacturing productivity and unit labor costs for Korea and Taiwan are examined for the 1985–2000 period, because 1985 is the first year for which comparable data are available for both of these economies. To follow the underlying trends, this analysis divides the 1985–2000 interval into three equal 5-year subperiods (1985–90, 1990–95, and 1995–2000).

Manufacturing productivity. Over the final 15 years of the 20th century, manufacturing output and labor productivity in both Korea and Taiwan increased considerably more than

those in the United States, Japan, or Europe G-4. This was also true for each of the three subperiods. (Compare tables 5, 2, and 3.) Furthermore, during each subperiod, the respective increases in Korea were greater than those in Taiwan.

Total hours worked in manufacturing declined in both economies between 1985 and 2000 by approximately the same proportion, but the timing of these declines differed somewhat. In Korea, employment increased until 1990, and declined at an accelerating rate after that. After 1995, manufacturing employment in Korea was falling more than 3 percent per year, which was more than the rate in Japan. In Taiwan, employment declined slowly until 1995, then increased after that. In both economies, average hours worked dropped somewhat or remained unchanged. The growth in employment in Taiwan after 1995 was sufficient to produce a slight increase in total hours worked. In comparison, the rate of decline in total hours in Korea between 1995 and 2000 was greater than the declining rates in any other country compared.

Hourly compensation and unit labor costs. Hourly compensation in manufacturing rose more in Korea and in Taiwan than in either the United States, Japan, or Europe G-4 during 1985–2000. Again, this was true during each of the three subperiods. Hourly compensation in Korean manufacturing increased more than that in Taiwan during each subperiod; the differences in the respective growth rates being especially marked between 1990 and 1995, when hourly compensation increases moderated in Taiwan, but continued to accelerate in Korea. After 1995, the rate of hourly

| Table 4. | Average annual rates of change in manufacturing labor productivity and related measures, European non-G-7 countries, selected periods, 1950–2000 |

Period and country	Output per hour	Output	Total hours	Employment	Average hours	Hourly compensation	Unit labor costs		Exchange rate
							National currency	U.S dollars	
1950–2000									
Denmark	—	3.1	—	0.2	—	—	4.5	4.2	−0.3
Netherlands	5.1	4.1	−.9	−.4	−.5	7.8	2.6	3.5	.9
Norway	2.9	2.1	−.8	−.2	−.6	8.7	5.6	5.1	−.4
Sweden	4.2	3.4	−.8	−.4	−.4	8.9	4.5	3.3	−1.1
1950–73									
Denmark	4.8	4.8	.0	1.2	−1.2	9.6	4.6	5.2	.6
Netherlands	6.5	6.3	−.3	.4	−.7	10.6	3.8	5.3	1.4
Norway	4.4	4.3	−.1	.6	−.7	9.3	4.7	5.7	.9
Sweden	5.1	4.6	−.5	.5	−.9	9.6	4.2	5.0	.8
1973–90									
Belgium	4.8	2.1	−2.6	−2.2	−.4	8.6	3.6	4.5	.9
Denmark	2.3	1.5	−.8	−.4	−.4	9.3	6.8	6.6	−.2
Netherlands	4.3	2.4	−1.9	−1.3	−.6	6.4	2.0	4.6	2.5
Norway	2.2	−.1	−2.2	−1.6	−.7	10.4	8.1	7.5	−.5
Sweden	2.6	1.4	−1.2	−.9	−.3	10.9	8.1	6.1	−1.8
1990–2000									
Belgium	3.3	1.9	−1.3	−1.4	.1	3.0	−.2	−2.9	−2.6
Denmark	—	2.1	—	−.9	—	—	.7	−2.0	−2.6
Netherlands	3.1	2.2	−.9	−.8	−.1	3.7	.6	−2.1	−2.7
Norway	.8	1.0	.3	.3	.0	4.3	3.5	.0	−3.4
Sweden	4.7	4.0	−.7	−1.6	.9	4.1	−.7	−4.9	−4.3

NOTE: Dash indicates data not available.

| Table 5. | Average annual rates of change in manufacturing labor productivity and related measures, Korea and Taiwan, selected periods, 1985–2000 |

Period and country	Output per hour	Output	Total hours	Employment	Average hours	Hourly compensation	Unit labor costs		Exchange rate
							National currency	U.S. dollars	
1985–90									
Korea	8.2	12.2	3.7	5.4	−1.6	15.6	6.9	11.1	3.9
Taiwan	7.9	7.0	−.8	−.5	−.4	11.5	3.4	11.8	8.2
1990–95									
Korea	9.7	8.4	−1.2	−.9	−.2	18.2	7.8	6.0	−1.7
Taiwan	5.3	5.0	−.3	−.3	.0	7.1	1.7	2.0	.3
1995–2000									
Korea	11.6	8.0	−3.2	−3.1	−.1	7.3	−3.9	−11.0	−7.3
Taiwan	5.5	5.7	.2	.5	−.3	4.0	−1.5	−4.7	−3.3

compensation increases declined in both economies, the average annual increases in Taiwan being similar to the increases in U.S. manufacturing.

Before 1995, the relatively large hourly compensation increases in Korea and Taiwan caused their unit labor costs, expressed in national currencies, to increase more than the unit labor costs in the United States or Japan. This occurred despite the higher productivity growth rates in Korea and Taiwan. From 1985 to 1990, the competitive position of both economies was further undermined by the appreciation of their currencies against the U.S. dollar.

After 1995, the more moderate growth in hourly compensation, and continued productivity increases, led to declines in unit labor costs in both economies, which were further reduced by the depreciation of both currencies against the U.S. dollar. □

Notes

[1] Karin Wagner and Bart Van Ark, eds., *International Productivity Differences; Measurement and Explanations* (Amsterdam, The Netherlands, Elsevier Science B.V., 1996).

[2] Paul Schreyer, "The Contribution of Information and Communication Technology to Output Growth: a Study of the G7 Countries," OECD, STI Working Paper 2000/2 (March 2000).

[3] Edwin R. Dean and Mark K. Sherwood, "Manufacturing costs, productivity, and competitiveness, 1979–93," *Monthly Labor Review*, October 1994, pp. 3–16.

[4] The Group of Seven (G-7) consists of the seven major market economies. It was launched in 1975 at a summit of the heads of state of six countries (United States, France, Germany, Italy, Japan, and the United Kingdom). Canada was included in 1976. Representatives of the G-7 countries meet annually to discuss the principal political and economic issues of the day. Because Russia has taken part in the annual economic discussions since 1997, the group is now often referred to as the G-8.

[5] Average annual growth rates of the various measures, for selected time periods, are shown on the accompanying tables and charts. The complete historical index series of the measures can be found in BLS Report 962, "International comparisons of labor productivity and unit labor costs in manufacturing, 2000," April 2002. BLS Report 962 is also available at the BLS Division of Foreign Labor Statistics Web site at:
http://www.bls.gov/fls/home.htm. The U.S. manufacturing output index for years prior to 1977 is accessible through the BLS Web site at: http://www.bls.gov/data/sa.htm

[6] The Ministers of Finance and Central Bank Governors of five countries (France, Germany, Japan, the United Kingdom, and the United States) met on September 22, 1985, at the Plaza Hotel in New York, to review economic developments and policies in their countries. The results of their meeting were summarized in an agreement, known as the "Plaza Accord." In particular, they noted that the "appreciation of the U.S. dollar" was among the factors that have "contributed to large, potentially destabilizing external imbalances among major industrial countries" and that an "appreciation of the main nondollar currencies against the dollar is desirable. They stand ready to cooperate more closely to encourage this when to do so would be helpful." For further information, access the University of Toronto Library and the G8 Research Group at the University of Toronto Web site at:
http://www/.library.utoronto.ca/g7/finance/fm850922.htm.

[7] The measure of hourly compensation used in this study refers to employer cost rather than to the net compensation of employees. In addition to payments to employees, it includes legally required contributions for social benefits. For this reason, and also because differences in national inflation rates are not taken into account, differences in hourly compensation growth do not necessarily reflect changes in relative workers' well-being.

[8] As discussed earlier, the U.S. output series was derived by linking at 1977 two output series based on two different concepts. The official manufacturing labor productivity series for the United States, based on sectoral output, shows an increase of 2.6 percent per year for 1950–73 and 2.5 percent per year for 1973–90.

APPENDIX: Measuring productivity and unit labor cost trends in manufacturing

The comparative measures of labor productivity and unit labor costs discussed in this article are based on underlying data obtained by the Bureau of Labor Statistics from the statistical agencies of the countries that are compared. BLS attempts, to the extent possible, to insure that the data series used to calculate the measures have comparable definitions, coverage, and reliability. When necessary, different data series are combined to arrive at aggregates that correspond to the required definitions and coverage. However, certain differences remain, such as the ways countries aggregate the components of output, or in the methods used to calculate price deflators for information technology products.

Labor productivity is defined as real output per hour worked. Although the labor productivity measure presented in this article relates output to the hours worked of persons employed in manufacturing, it does not measure the specific contributions of labor as a single factor of production. Rather, it reflects the joint effects of many influences, including new technology, capital investment, capacity utilization, energy use, and managerial skills, as well as the skills and efforts of the workforce.

Unit labor costs are defined as the cost of labor input required to produce one unit of output. They are computed as labor compensation in nominal terms, divided by real output.

BLS constructs comparative trend indexes of manufacturing labor productivity, hourly compensation costs, and unit labor costs from three basic aggregate measures—output, total labor hours, and total compensation. The hours and compensation measures refer to employees only (wage and salary earners) in Belgium, Denmark, Italy, and Taiwan. For all other countries, the measures refer to all employed persons, including employees, self-employed persons, and unpaid family workers. For all of the countries, the term "hours" refers to hours worked.

In general, the measures relate to total manufacturing as defined by the International Standard Industrial Classification (ISIC). However, the measures for Denmark include mining and exclude manufacturing handicrafts from 1960 to 1966.

The comparisons in this article make use of data made available to BLS as of November 2001 by the statistical agencies of the individual countries. For some countries, the data for the most recent years are based on the European System of Integrated National Accounts (ESA 95) or on the United Nations System of National Accounts 1993 (SNA 93). For other countries, data were compiled according to previously used systems.

To obtain historical time series, BLS may link together data series which were compiled according to different accounting systems by the countries' statistical agencies.

Output. In this article, manufacturing output data for the United States from 1977 forward are the gross product originating (value added) measures prepared by the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce. U. S. gross product originating is a chain-type annual-weighted series.[1] For years before 1977, U.S. output growth is based on growth of the

manufacturing output series that BLS publishes on quarterly measures of U.S. productivity and costs. The quarterly measures are on a sectoral output basis rather than a value-added basis. Sectoral output is gross output less intra-sector sales and transfers.[2] These two series are linked at 1977. Before linking the two time series, their movements were compared over the 1977–2000 interval. It was found that the two series have similar long-term trends, and that their annual fluctuations usually are in the same direction, but can differ substantially in magnitude.

A value-added concept has been used for the international comparisons series because the data are more readily available in the countries' national accounts, whereas sectoral output would require a complex estimation procedure. Also, although BLS has determined that sectoral output is the correct concept for U.S. measures of single factor productivity (output per hour), there are other considerations that may make value added a better concept for international comparisons, such as differences among countries in the extent of vertical integration.

For most countries, the output measures are value added in manufacturing from the national accounts. However, output for Japan prior to 1970 and for the Netherlands prior to 1960 are indexes of industrial production. The manufacturing value-added measures for the United Kingdom are essentially identical to their indexes of industrial production.

Estimation of manufacturing real output using moving price weights is becoming prevalent. For example, the output measure for manufacturing in the United States is the chain-weighted index of real gross product originating, based on annually changing price weights. However, even when chain-weighting is introduced in a country, many earlier time periods within a historical real output series may continue to be estimated using fixed price weights, with the weights updated periodically (for example, every 5 or 10 years).

Measures of real output may also differ among countries because of different approaches to estimating the prices of high-technology products like computers and, in general, of products that undergo rapid quality change. Possible measurement problems in comparative estimates of manufacturing productivity, arising from the effect of quality-adjusted price indexes, as well as other measurement issues were examined for the case of the United States and Canada in a paper by Eldridge and Sherwood.[3] They found that measurement differences do not explain the differences observed in manufacturing productivity for these two countries between 1988–98. It is the case, however, that the United States and Canada use similar methodologies to estimate price indexes for computers, although the measurements of other high-tech products vary.

The other countries compared in this article vary widely in the methods used to quality-adjust the price indexes of high-technology products. BLS is currently conducting a review of the methods used in the foreign countries.

Labor input. The aggregate hours worked series used for France (from 1970 forward), Norway, Sweden, and Canada are series published with the national accounts. For the former West Germany after 1959 and Germany from 1991, BLS uses aggregate hours worked, which were developed by a research institute of the German Ministry of Labor to use with the national accounts employment figures. For the United Kingdom from 1992, an index of total manufacturing hours is used, derived from published quarterly indices of manufacturing hours. For other countries, the United Kingdom before 1992, and the former West Germany before 1959, BLS constructs its own estimates of average hours, using employment figures published with the national accounts, or other

comprehensive employment series, and estimates of average annual hours worked. For this article, Italian employment is based on a new series of the number of employees in manufacturing, instead of on labor units, as in previous releases.

The new estimates of total hours worked in the manufacturing sector in Korea from 1985 to 2000 are based on an employed persons' series and an average annual hours worked series. The data are prepared by the Korean Productivity Center (KPC) according to the System of National Accounts 1993 (SNA 93). The resulting hours worked series is the same that the Korean Productivity Center uses to calculate manufacturing productivity. The Korean Productivity Center publishes the employed persons series, the average hours series, and the aggregate hours series as indexes in the Korean *Quarterly Productivity Review.*

The new estimates of aggregate hours worked in the manufacturing sector in Taiwan from 1973 to 2000 are based on the number of employees and average annual hours worked data from the monthly "Employees' Earnings Survey" conducted by the Taiwan Directorate General of Budget Accounting and Statistics (DGBAS). The survey covers all establishments with two or more employees in the entire territory of Taiwan. The results are published in the Taiwan *Yearbook of Earnings and Productivity Statistics.*

Compensation (labor cost). The compensation measures are from national accounts data. Compensation includes employer expenditures for legally required insurance programs and contractual and private benefit plans, in addition to all payments made in cash or in kind directly to employees. For Canada, France, and Sweden, BLS increases compensation to account for taxes on payroll or employment. For the United Kingdom, compensation is reduced between 1967 and 1991 to account for subsidies. When data for the self-employed are not available, total compensation is estimated by assuming the same hourly compensation for self-employed and employees; in this article, this procedure is used for the first time to adjust Korean manufacturing compensation to an all-persons basis.

Data for Germany. The German Federal Statistical Office began to publish economic statistical series for unified Germany beginning with 1991, after the re-unification of Germany. For prior years, only data for the former West Germany were available. In this article, the data series for Germany are for the former West Germany for years before 1991, and for unified Germany beginning with 1991. These series are linked at 1991.

Current indicators. The measures for recent years may be based on current indicators of output (such as industrial production indexes), employment, average hours, and hourly compensation until national accounts and other statistics, normally used for the long-term measures, become available.

Level comparisons. The BLS measures are limited to trend comparisons. BLS does not prepare level comparisons of manufacturing productivity and unit labor costs because of data limitations and technical problems in comparing the levels of manufacturing output among countries. Each country measures manufacturing output in its own currency units. To compare outputs among countries, a common unit of measure would be needed. Market exchange rates are not suitable as a basis for comparing output levels. What is needed are purchasing power parities, which are the number of foreign currency units required to

buy goods and services equivalent to what can be bought with one unit of U.S. currency.

Purchasing power parities are available for total gross domestic product (GDP) from the Organization for Economic Cooperation and Development (OECD). However, these parities are derived for expenditures made by consumers, business, and government for goods and services—not for value added by industry. Therefore, the parities for total GDP are not suitable for each component industry, such as manufacturing.

European exchange rates.   On Jan. 1, 1999, 11 European countries joined the European Monetary Union (EMU). Greece joined on Jan. 1, 2001. Currencies of European Monetary Union members are established at fixed conversion rates to the euro, the official currency of the European Monetary Union. Exchange rates between the national currencies of European Monetary Union countries and the

U.S. dollar are no longer reported; only the exchange rate between the euro and the U.S. dollar is available.

In this article, exchange rates for the year 2000, in national currencies for Belgium, France, Germany, Italy, and the Netherlands are calculated by taking the number of euros per U.S. dollar and then converting euros into national currencies at fixed conversion rates.

1 euro equals:

40.3399	Belgian francs
6.55957	French francs
1.95583	German marks
1,936.27	Italian lire
2.20371	Netherlands guilders

In 2000, 1 euro was equal to 0.9232 U.S. dollars. The currency exchange rates cited in this publication are annual averages of daily buying rates in New York City.

Notes to the appendix

[1] For more information on the U. S. measure, see Sherlene K.S. Lum, Brian C. Moyer, and Robert E. Yuskavage, "Improved Estimates of Gross Product by Industry for 1947–98," *Survey of Current Business*, June 2000, pp. 24–38.

[2] For information on sectoral output, see William Gullickson, "Meas-

urement of productivity growth in U.S. manufacturing," *Monthly Labor Review*, July 1995, pp. 13–28.

[3] Lucy P. Eldridge and Mark K. Sherwood, "A perspective on the U.S.-Canada manufacturing productivity gap," *Monthly Labor Review*, February 2001, pp. 31–48.

Nations and inequality

One especially important international comparison is of trends in wage inequality. Daron Acemoglu, in National Bureau of Economic Research Working Paper 8832, *Cross-Country Inequality Trends*, suggests that in addition to relative supply explanations for the faster rise of inequality in the United States and United Kingdom than in the rest of Europe, there may have been a differential change in the relative demand for skills.

Wage inequality and the return to education have risen quite quickly in the United States and Great Britain. The traditional relative supply accounting for this concludes that the relative supply of skill rose faster in continental Europe and that the wage setting institutions of European workers resisted rises in wage inequality.

That wage compression is the starting point for Acemoglu. Wage compression forces firms to pay higher wages to unskilled workers than they would otherwise. This creates greater incentive to adopt technologies that increase the productivity of those workers, thus raising relative demand for their services. In contrast, technology adoption in the United States is often characterized as "skill-biased"—oriented toward increasing the productivity of the highly-paid, highly-skilled worker.

Factory life-cycles

There is considerable churn in employment among and within establishments; this has been well documented. Aubhik Khan, a senior economist at the Federal Reserve Bank of Philadelphia writing in the Bank's *Business Review,* examines some of that literature and touches on two possible explanations for some of the patterns he finds.

One measure of job churning Khan reports on is the excess of job creation and destruction over the rates necessary to produce the net change produced in the period. Such "excess job reallocation" varied both by size of establishment and the establishment's age. In general, smaller plants had higher rates of both job creation and job loss than did larger plants and higher measures of reallocation of employment after backing out net growth. Similarly, younger plants had higher rates of job creation, destruction, and "excess reallocation" than did older plants.

There are two explanations for these patterns of employment volatility, according to Khan's article. The first is a credit and collateral story: Larger plants have more collateral and thus more access to credit to smooth out demand fluctuations, at least in the short term. The other is a learning story: Managers in younger (and usually smaller) plants are more responsive to new data on the profitability of the plant. This may lead to sharp adjustments in the early years of the plants life. As more data are accumulated over time, the influence of new pieces of evidence is attenuated to some degree. Kahn believes the two stories may be complementary explanations of employment changes at the plant level.

Multiple jobholding in Canada

In 2001, according to annual average data from the Canadian Labour Force Survey, about 5 percent of workers in that country held more than one job during the survey's reference weeks. (This estimate is quite similar to the annual average multiple jobholding rate produced for the United States by the Current Population Survey in 2001.) Katherine Marshall, writing in the Statistics Canada publication *Perspectives on Labour and Income*, reports that the share of Canadians that experienced at least one spell of multiple jobholding during the year was double that, about 10 percent.

Using longitudinal data from the Survey of Labour and Income Dynamics, Marshall also was able to estimate durations of completed spells of multiple jobholding and analyze the characteristics of short-, medium-, and long-term multiple jobholders in 1996. The average first spell of "moonlighting" was 8 months. Of the 1.1 million multiple jobholders who completed a spell that began in 1996, a little less than a third started a second before 1999. The median gap between such spells was 9 months.

The most striking demographic dimension among multiple jobholders in late-1990s Canada was the difference in age between those who moonlit for relatively short spells versus those who had longer spells of multiple jobholding. Short-term moonlighters tended to be younger—median age 27 years—while long-termers had a median age of 40 years. Marshall attributes this to differing motivations for holding more than one job: "Younger workers (under age 35) were most likely to state [in the 1995 Survey of Work Arrangements] either household expenses or debts as the main reason for holding more than one job, whereas older workers (45 and older) were more likely to answer that they enjoyed the work on the second job." □

German-U.S. labor economics

Labor, Business and Change in Germany and the United States. By Kristen S. Wever, ed. Kalamazoo, MI, W.E. Upjohn Institute for Employment Research, 2001, 177 pp., softcover.

This collection of articles explores the feasibility of mutual learning 'on the ground' between two nations competing in a global market. It is the result of a 2-year German-American project.

The lead article by Batt and Darbishire on telecommunications furnishes an excellent lesson. They argue, like new institutionalists, that failure to place economics within a sociopolitical setting is a barrier to cross-national learning, thus giving overdue consideration for values other than those of the market. For example, they demonstrate that, in order to protect jobs, German work councils' participation in industry decisions slowed adaptation to the point of never fully implementing new telecommunications technology. They contrast this to the U.S. abandonment of the implicit labor contract for which AT&T had been the prototype. Consequently, in lieu of cost-cutting technology, German market strategy focused on revenue-enhancing, high-end products.

In both countries, technological evolution was challenging regulated monopolies. In Germany, telecommunications was an official state monopoly. Prior to its breakup, AT&T had functioned as a quasi-official monopoly that subsidized local phone service through its higher charges to business and long-distance customers. No less a market decision, local rates depended on political goodwill. Innovations allowed MCI and others to sell profitably, in the spread between AT&T's long-distance and local service, technologically advancing long-distance service. The U.S. setting required legal challenges to AT&T's monopoly, which were successful.

The new era of competition following the AT&T breakup had implications for organized labor. The authors contrast labor weakness as a social institution in the United States with the strong position of the aforementioned German worker representatives by pointing out the willingness of the Communications Workers of America (CWA) to bargain on the effects only of management decisions.

Consistently noting the welfare costs of downsizing in their analysis, the authors assess the cost to post-breakup AT&T, in the loss of skilled workers to the new industry and the lowered cooperation of those who remained. The losses, consequently, involved substantial investment in hiring and retraining.

In another article, Finegold and Keltner provide a full inventory of training and educational resources for management development in the United States and Germany. They do not address the corporatist structure of German institutional constraints. In attributing rigidity to the State, for example, they might have discovered a more nuanced story in the fate of the adaptive comprehensive university, the Gesamthochschulen. The university establishment opposed this State response to changing educational needs.

Casper's substantive article describes in telling detail the competitively driven response of the U.S. and German automobile manufacturers to the challenge of Japanese just-in-time (JIT) inventory models. The problem was one of apportioning the high-cost risks of defective deliveries. Summaries cannot do justice to the wealth of information provided by Casper. German assemblers faced a law intended to protect the weaker small-business suppliers. They needed creative legal solutions. American manufacturers faced a lack of qualified plant employees whose counterparts in Japan and Germany could inspect deliveries. The solution forced them to cooperate in developing a cross-industry quality control statistical standard, which they found in a Defense Department model. In each case, the institutions that served as instruments of adaptation were modified by their application to an economic challenge.

The chapter by the editor of the volume, Kirsten Wever, together with Fichter and Turner, sums up implications for industrial relations in the two countries. Competitive disadvantages of a higher average living standard on the German "high road" are contrasted to competitive advantages resulting from a more widely dispersed income distribution on the American "low road." They foresee trouble along the high road from the liberalizing effects of the EU on the German economy, while they hope for a more equitable solution in the United States from a strengthening union movement. The Bureau of Labor Statistics 2001 report on union membership, however, gainsays their optimism.

The collection breaks new ground in its integration of indepth research with masterly theoretical argument. The reader has the impression of being plunged into the midst of change while being guided by a firm hand.

—Solidelle Fortier Wasser
New York region,
Bureau of Labor Statistics

Economic efficiency

Economic Efficiency in Law and Economics. By Richard O. Zerbe, Jr. Northampton, MA, Edward Elgar Publishing, Inc., 2001, 328 pp. $95/hardcover, $35/paperback.

Economic Efficiency in Law and Economics explains and defends Zerbe's improved version of benefit-cost analysis, which is used to assess the anticipated economic effects of a change, such as new legislation, a precedent-breaking court ruling, or the breakup of a monopoly. In both previous models and in

Zerbe's new "KHZ analysis," predicted gains and losses to parties are assessed to determine whether a proposed change will result in a net overall gain or loss to society. If a net gain results, the economic system becomes more "efficient."

Zerbe is well qualified to write such a book. He is a professor of public affairs at the Daniel J. Evans School of Public Affairs and an adjunct professor at the University of Washington Law School. He has authored or co-authored related articles and papers, as well as a textbook.

Zerbe improves on previous versions of benefit-cost analysis by including the costs of transactions (sales of assets) that predictably will occur because of a change. The recognition of transactions costs is justifiable, as such costs are indeed among the consequences of a change in economic factors.

Zerbe also recognizes the fact that people tend to value rights or possessions they already have more than rights or assets they contemplate acquiring. A purely commercial asset, defined as one desired only for the income it can generate, is an exception to the rule and is valued equally whether one owns it or not. Thus, in estimating the effects of a transfer of a noncommercial asset, the analyst should recognize that the asset's value to the old owner may differ from its value to the new owner. The subjective cost to the old owner in giving up the asset may exceed the subjective gain experienced by the new owner. Furthermore, perceived ownership—whether one believes one owns an asset or not—as opposed to objective ownership is relevant to how one values the property or right. Zerbe makes a convincing argument that perceived ownership should be entailed in benefit-cost analysis.

Zerbe also emphasizes the "regard for others" as part of his analysis. The preferences of the general public, as well as those immediately affected by transactions, should serve as a basis of some of the costs and benefits to be counted. Through the "regard for others," KHZ analysis can entail societal demands for justice and concern for future generations. Zerbe does emphasize, however, that KHZ analysis is not an infallible guide to the right course of action; instead, KHZ analysis is a tool to provide information to be considered before a decision is made.

Values to be counted in KHZ analysis are in terms of the amounts that parties would be willing to pay to acquire a right or possession, and amounts that parties would be willing to accept in exchange for a right or possession. No other means of quantification is apparently available, yet a certain weakness of KHZ analysis arises from that means of measuring benefits and losses. Specifically, the wealth or poverty of a party can affect the party's ability to buy, or willingness to sell, a possession or right. Therefore, the values used in KHZ analysis reflect the parties' economic status as well as their desire or need for the commodity or right at issue. KHZ analysis, then, tends to favor the more affluent.

This tendency is not much emphasized by Zerbe. He does mention that utility, as opposed to willingness to pay or to accept payment, cannot be quantified. Therefore, the problem is apparently impossible to solve, as monetary amounts to be paid or received must be the terms used in KHZ analysis. Just the same, Zerbe might give greater emphasis to an apparently serious shortcoming of KHZ analysis—that it tends to favor those who have greater assets. The "regard for others" as a factor in KHZ analysis may prevent blatantly unjust determinations, but regard for others does not completely nullify the more favorable position of those who can more easily pay a certain amount to acquire an asset, gain a right, or change the law to their advantage.

An additional criticism of KHZ analysis can be made. While transactions costs are to be counted, "the costs of enacting a rule change are not to be included in determining whether or not a new rule is efficient." Because such costs are, by definition, *costs*, they logically ought to be included. Zerbe defends his decision to exclude such costs in a way that is somewhat difficult to interpret and apparently not empirically tested.

After briefly reviewing the history of benefit-cost analysis and revealing his new form of it, Zerbe criticizes the theory of market failure, arguing that KHZ analysis is a much superior concept. He then goes on to apply KHZ analysis to issues including abortion, theft, rape, and slavery. He argues that societal changes— such as changes in technology, institutions, or public sentiment—can make previously efficient rules inefficient in the sense that a more efficient set of rules becomes possible. Finally, he shows that the common law naturally arises in a manner such that it fosters economic efficiency. He illustrates his claim by analyzing the historic issues of dueling, cannibalism, and the 19th century Gold Rush.

Zerbe's new book is high-powered and potentially important. Its style, however, is mostly dry and may be difficult for the layman to follow, despite the juicy illustrative topics. *Economic Efficiency in Law and Economics* is recommended for those who are particularly interested in the topic of economic efficiency, either professionally or personally.

—Bill Goodman

Current Employment Statistics Division, Bureau of Labor Statistics

Current Labor Statistics

Notes on Current Labor Statistics

This section of the *Review* presents the principal statistical series collected and calculated by the Bureau of Labor Statistics: series on labor force; employment; unemployment; labor compensation; consumer, producer, and international prices; productivity; international comparisons; and injury and illness statistics. In the notes that follow, the data in each group of tables are briefly described; key definitions are given; notes on the data are set forth; and sources of additional information are cited.

General notes

The following notes apply to several tables in this section:

Seasonal adjustment. Certain monthly and quarterly data are adjusted to eliminate the effect on the data of such factors as climatic conditions, industry production schedules, opening and closing of schools, holiday buying periods, and vacation practices, which might prevent short-term evaluation of the statistical series. Tables containing data that have been adjusted are identified as "seasonally adjusted." (All other data are not seasonally adjusted.) Seasonal effects are estimated on the basis of past experience. When new seasonal factors are computed each year, revisions may affect seasonally adjusted data for several preceding years.

Seasonally adjusted data appear in tables 1–14, 16–17, 43, and 47. Seasonally adjusted labor force data in tables 1 and 4–9 were revised in the February 2002 issue of the *Review*. Seasonally adjusted establishment survey data shown in tables 1, 12–14 and 16–17 were revised in the July 2001 *Review* and reflect the experience through March 2001. A brief explanation of the seasonal adjustment methodology appears in "Notes on the data."

Revisions in the productivity data in table 49 are usually introduced in the September issue. Seasonally adjusted indexes and percent changes from month-to-month and quarter-to-quarter are published for numerous Consumer and Producer Price Index series. However, seasonally adjusted indexes are not published for the U.S. average All-Items CPI. Only seasonally adjusted percent changes are available for this series.

Adjustments for price changes. Some data—such as the "real" earnings shown in table 14—are adjusted to eliminate the effect of changes in price. These adjustments are made by dividing current-dollar values by the Consumer Price Index or the appropriate component of the index, then multiplying by 100. For example, given a current hourly wage rate of $3 and a current price index number of 150, where 1982 = 100, the hourly rate expressed in 1982 dollars is $2 ($3/150 x 100 = $2). The $2 (or any other resulting values) are described as "real," "constant," or "1982" dollars.

Sources of information

Data that supplement the tables in this section are published by the Bureau in a variety of sources. Definitions of each series and notes on the data are contained in later sections of these Notes describing each set of data. For detailed descriptions of each data series, see BLS *Handbook of Methods*, Bulletin 2490. Users also may wish to consult *Major Programs of the Bureau of Labor Statistics*, Report 919. News releases provide the latest statistical information published by the Bureau; the major recurring releases are published according to the schedule appearing on the back cover of this issue.

More information about labor force, employment, and unemployment data and the household and establishment surveys underlying the data are available in the Bureau's monthly publication, *Employment and Earnings*. Historical unadjusted and seasonally adjusted data from the household survey are available on the Internet:

http://www.bls.gov/cps/

Historically comparable unadjusted and seasonally adjusted data from the establishment survey also are available on the Internet:

http://www.bls.gov/ces/

Additional information on labor force data for areas below the national level are provided in the BLS annual report, *Geographic Profile of Employment and Unemployment*.

For a comprehensive discussion of the Employment Cost Index, see *Employment Cost Indexes and Levels, 1975–95*, BLS Bulletin 2466. The most recent data from the Employee Benefits Survey appear in the following Bureau of Labor Statistics bulletins: *Employee Benefits in Medium and Large Firms; Employee Benefits in Small Private Establishments;* and *Employee Benefits in State and Local Governments*.

More detailed data on consumer and producer prices are published in the monthly periodicals, *The CPI Detailed Report* and *Producer Price Indexes*. For an overview of the 1998 revision of the CPI, see the December 1996 issue of the *Monthly Labor Review*. Additional data on international prices appear in monthly news releases.

Listings of industries for which productivity indexes are available may be found on the Internet:

http://www.bls.gov/lpc/

For additional information on international comparisons data, see *International Comparisons of Unemployment*, BLS Bulletin 1979.

Detailed data on the occupational injury and illness series are published in *Occupational Injuries and Illnesses in the United States, by Industry*, a BLS annual bulletin.

Finally, the *Monthly Labor Review* carries analytical articles on annual and longer term developments in labor force, employment, and unemployment; employee compensation and collective bargaining; prices; productivity; international comparisons; and injury and illness data.

Symbols

n.e.c. = not elsewhere classified.
n.e.s. = not elsewhere specified.
p = preliminary. To increase the timeliness of some series, preliminary figures are issued based on representative but incomplete returns.
r = revised. Generally, this revision reflects the availability of later data, but also may reflect other adjustments.

Comparative Indicators

(Tables 1–3)

Comparative indicators tables provide an overview and comparison of major BLS statistical series. Consequently, although many of the included series are available monthly, all measures in these comparative tables are presented quarterly and annually.

Labor market indicators include employment measures from two major surveys and information on rates of change in compensation provided by the Employment Cost Index (ECI) program. The labor force participation rate, the employment-to-population ratio, and unemployment rates for major demographic groups based on the Current Population ("household") Survey are presented, while measures of employment and average weekly hours by major industry sector are given using nonfarm payroll data. The Employment Cost Index (compensation), by major sector and by bargaining status, is chosen from a variety of BLS compensation and wage measures because it provides a comprehensive measure of employer costs for hiring labor, not just outlays for wages, and it is not affected by employment shifts among occupations and industries.

Data on **changes in compensation, prices, and productivity** are presented in table 2. Measures of rates of change of compensa-

tion and wages from the Employment Cost Index program are provided for all civilian nonfarm workers (excluding Federal and household workers) and for all private nonfarm workers. Measures of changes in consumer prices for all urban consumers; producer prices by stage of processing; overall prices by stage of processing; and overall export and import price indexes are given. Measures of productivity (output per hour of all persons) are provided for major sectors.

Alternative measures of wage and compensation rates of change, which reflect the overall trend in labor costs, are summarized in table 3. Differences in concepts and scope, related to the specific purposes of the series, contribute to the variation in changes among the individual measures.

Notes on the data

Definitions of each series and notes on the data are contained in later sections of these notes describing each set of data.

Employment and Unemployment Data

(Tables 1; 4–24)

Household survey data

Description of the series

EMPLOYMENT DATA in this section are obtained from the Current Population Survey, a program of personal interviews conducted monthly by the Bureau of the Census for the Bureau of Labor Statistics. The sample consists of about 60,000 households selected to represent the U.S. population 16 years of age and older. Households are interviewed on a rotating basis, so that three-fourths of the sample is the same for any 2 consecutive months.

Definitions

Employed persons include (1) all those who worked for pay any time during the week which includes the 12th day of the month or who worked unpaid for 15 hours or more in a family-operated enterprise and (2) those who were temporarily absent from their regular jobs because of illness, vacation, industrial dispute, or similar reasons. A person working at more than one job is counted only in the job at which he or she worked the greatest number of hours.

Unemployed persons are those who did not work during the survey week, but were available for work except for temporary illness and had looked for jobs within the preceding 4 weeks. Persons who did not look

for work because they were on layoff are also counted among the unemployed. **The unemployment rate** represents the number unemployed as a percent of the civilian labor force.

The **civilian labor force** consists of all employed or unemployed persons in the civilian noninstitutional population. Persons **not in the labor force** are those not classified as employed or unemployed. This group includes discouraged workers, defined as persons who want and are available for a job and who have looked for work sometime in the past 12 months (or since the end of their last job if they held one within the past 12 months), but are not currently looking, because they believe there are no jobs available or there are none for which they would qualify. The **civilian noninstitutional population** comprises all persons 16 years of age and older who are not inmates of penal or mental institutions, sanitariums, or homes for the aged, infirm, or needy. The **civilian labor force participation** rate is the proportion of the civilian noninstitutional population that is in the labor force. The **employment-population ratio** is employment as a percent of the civilian noninstitutional population.

Notes on the data

From time to time, and especially after a decennial census, adjustments are made in the Current Population Survey figures to correct for estimating errors during the intercensal years. These adjustments affect the comparability of historical data. A description of these adjustments and their effect on the various data series appears in the Explanatory Notes of *Employment and Earnings*.

Labor force data in tables 1 and 4–9 are seasonally adjusted. Since January 1980, national labor force data have been seasonally adjusted with a procedure called X-11 ARIMA which was developed at Statistics Canada as an extension of the standard X-11 method previously used by BLS. A detailed description of the procedure appears in the X-11 *ARIMA Seasonal Adjustment Method*, by Estela Bee Dagum (Statistics Canada, Catalogue No. 12-564E, January 1983).

At the beginning of each calendar year, historical seasonally adjusted data usually are revised, and projected seasonal adjustment factors are calculated for use during the January–June period. The historical seasonally adjusted data usually are revised for only the most recent 5 years. In July, new seasonal adjustment factors, which incorporate the experience through June, are produced for the July–December period, but no revisions are made in the historical data.

FOR ADDITIONAL INFORMATION on national household survey data, contact the Division of Labor Force Statistics: (202) 691–6378.

Establishment survey data

Description of the series

EMPLOYMENT, HOURS, AND EARNINGS DATA in this section are compiled from payroll records reported monthly on a voluntary basis to the Bureau of Labor Statistics and its cooperating State agencies by about 300,000 establishments representing all industries except agriculture. Industries are classified in accordance with the 1987 *Standard Industrial Classification (SIC) Manual*. In most industries, the sampling probabilities are based on the size of the establishment; most large establishments are therefore in the sample. (An establishment is not necessarily a firm; it may be a branch plant, for example, or warehouse.) Self-employed persons and others not on a regular civilian payroll are outside the scope of the survey because they are excluded from establishment records. This largely accounts for the difference in employment figures between the household and establishment surveys.

Definitions

An **establishment** is an economic unit which produces goods or services (such as a factory or store) at a single location and is engaged in one type of economic activity.

Employed persons are all persons who received pay (including holiday and sick pay) for any part of the payroll period including the 12th day of the month. Persons holding more than one job (about 5 percent of all persons in the labor force) are counted in each establishment which reports them.

Production workers in manufacturing include working supervisors and nonsupervisory workers closely associated with production operations. Those workers mentioned in tables 11–16 include production workers in manufacturing and mining; construction workers in construction; and nonsupervisory workers in the following industries: transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for about four-fifths of the total employment on private nonagricultural payrolls.

Earnings are the payments production or nonsupervisory workers receive during the survey period, including premium pay for overtime or late-shift work but exclud-

ing irregular bonuses and other special payments. **Real earnings** are earnings adjusted to reflect the effects of changes in consumer prices. The deflator for this series is derived from the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

Hours represent the average weekly hours of production or nonsupervisory workers for which pay was received, and are different from standard or scheduled hours. **Overtime hours** represent the portion of average weekly hours which was in excess of regular hours and for which overtime premiums were paid.

The **Diffusion Index** represents the percent of industries in which employment was rising over the indicated period, plus one-half of the industries with unchanged employment; 50 percent indicates an equal balance between industries with increasing and decreasing employment. In line with Bureau practice, data for the 1-, 3-, and 6-month spans are seasonally adjusted, while those for the 12-month span are unadjusted. Data are centered within the span. Table 17 provides an index on private nonfarm employment based on 356 industries, and a manufacturing index based on 139 industries. These indexes are useful for measuring the dispersion of economic gains or losses and are also economic indicators.

Notes on the data

Establishment survey data are annually adjusted to comprehensive counts of employment (called "benchmarks"). The latest adjustment, which incorporated March 2000 benchmarks, was made with the release of May 2001 data, published in the July 2001 issue of the *Review*. Coincident with the benchmark adjustment, historical seasonally adjusted data were revised to reflect updated seasonal factors. Unadjusted data from April 2000 forward and seasonally adjusted data from January 1997 forward are subject to revision in future benchmarks.

In addition to the routine benchmark revisions and updated seasonal factors introduced with the release of the May 2001 data, the first estimates for the mining, construction, and manufacturing industries were published from a new probability-based sample design. The first estimates from the new design, for the wholesale trade industry, were published with the March 1999 benchmark revisions in June 2000. Estimates from the redesigned survey for the remaining industry divisions will be phased in with subsequent years' benchmark releases in 2002 and 2003. For additional information, see the the June 2001 issue of *Employment and Earnings*.

Revisions in State data (table 11) occurred with the publication of January 2002 data.

Beginning in June 1996, the BLS uses the X-12-ARIMA methodology to seasonally adjust establishment survey data. This procedure, developed by the Bureau of the Census, controls for the effect of varying survey intervals (also known as the 4- versus 5-week effect), thereby providing improved measurement of over-the-month changes and underlying economic trends. Revisions of data, usually for the most recent 5-year period, are made once a year coincident with the benchmark revisions.

In the establishment survey, estimates for the most recent 2 months are based on incomplete returns and are published as preliminary in the tables (12–17 in the *Review*). When all returns have been received, the estimates are revised and published as "final" (prior to any benchmark revisions) in the third month of their appearance. Thus, December data are published as preliminary in January and February and as final in March. For the same reasons, quarterly establishment data (table 1) are preliminary for the first 2 months of publication and final in the third month. Thus, fourth-quarter data are published as preliminary in January and February and as final in March.

FOR ADDITIONAL INFORMATION on establishment survey data, contact the Division of Current Employment Statistics: (202) 691–6555.

Unemployment data by State

Description of the series

Data presented in this section are obtained from the Local Area Unemployment Statistics (LAUS) program, which is conducted in cooperation with State employment security agencies.

Monthly estimates of the labor force, employment, and unemployment for States and sub-State areas are a key indicator of local economic conditions, and form the basis for determining the eligibility of an area for benefits under Federal economic assistance programs such as the Job Training Partnership Act. Seasonally adjusted unemployment rates are presented in table 10. Insofar as possible, the concepts and definitions underlying these data are those used in the national estimates obtained from the CPS.

Notes on the data

Data refer to State of residence. Monthly data for all States and the District of Columbia are derived using standardized procedures established by BLS. Once a year, estimates are revised to new population controls, usually with publication of January estimates, and benchmarked to annual average CPS levels.

FOR ADDITIONAL INFORMATION on data in this series, call (202) 691–6392 (table 10) or (202) 691–6559 (table 11).

Covered employment and wage data (ES–202)

Description of the series

EMPLOYMENT, WAGE, AND ESTABLISHMENT DATA in this section are derived from the quarterly tax reports submitted to State employment security agencies by private and State and local government employers subject to State unemployment insurance (UI) laws and from Federal, agencies subject to the Unemployment Compensation for Federal Employees (UCFE) program. Each quarter, State agencies edit and process the data and send the information to the Bureau of Labor Statistics.

The Covered Employment and Wages data, also referred as ES-202 data, are the most complete enumeration of employment and wage information by industry at the national, State, metropolitan area, and county levels. They have broad economic significance in evaluating labor market trends and major industry developments.

Definitions

In general, ES-202 monthly employment data represent the number of **covered workers** who worked during, or received pay for, the pay period that included the 12th day of the month. **Covered private industry employment** includes most corporate officials, executives, supervisory personnel, professionals, clerical workers, wage earners, piece workers, and part-time workers. It excludes proprietors, the unincorporated self-employed, unpaid family members, and certain farm and domestic workers. Certain types of nonprofit employers, such as religious organizations, are given a choice of coverage or exclusion in a number of States. Workers in these organizations are, therefore, reported to a limited degree.

Persons on paid sick leave, paid holiday, paid vacation, and the like, are included. Persons on the payroll of more than one firm during the period are counted by each UI-subject employer if they meet the employment definition noted earlier. The employment count excludes workers who earned no wages during the entire applicable pay period because of work stoppages, temporary

layoffs, illness, or unpaid vacations.

Federal employment data are based on reports of monthly employment and quarterly wages submitted each quarter to State agencies for all Federal installations with employees covered by the Unemployment Compensation for Federal Employees (UCFE) program, except for certain national security agencies, which are omitted for security reasons. Employment for all Federal agencies for any given month is based on the number of persons who worked during or received pay for the pay period that included the 12th of the month.

An **establishment** is an economic unit, such as a farm, mine, factory, or store, that produces goods or provides services. It is typically at a single physical location and engaged in one, or predominantly one, type of economic activity for which a single industrial classification may be applied. Occasionally, a single physical location encompasses two or more distinct and significant activities. Each activity should be reported as a separate establishment if separate records are kept and the various activities are classified under different four-digit SIC codes.

Most employers have only one establishment; thus, the establishment is the predominant reporting unit or statistical entity for reporting employment and wages data. Most employers, including State and local governments who operate more than one establishment in a State, file a Multiple Worksite Report each quarter, in addition to their quarterly UI report. The Multiple Worksite Report is used to collect separate employment and wage data for each of the employer's establishments, which are not detailed on the UI report. Some very small multi-establishment employers do not file a Multiple Worksite Report. When the total employment in an employer's secondary establishments (all establishments other than the largest) is 10 or fewer, the employer generally will file a consolidated report for all establishments. Also, some employers either cannot or will not report at the establishment level and thus aggregate establishments into one consolidated unit, or possibly several units, though not at the establishment level.

For the Federal Government, the reporting unit is the **installation**: a single location at which a department, agency, or other government body has civilian employees. Federal agencies follow slightly different criteria than do private employers when breaking down their reports by installation. They are permitted to combine as a single statewide unit: 1) all installations with 10 or fewer workers, and 2) all installations that have a combined total in the

State of fewer than 50 workers. Also, when there are fewer than 25 workers in all secondary installations in a State, the secondary installations may be combined and reported with the major installation. Last, if a Federal agency has fewer than five employees in a State, the agency headquarters office (regional office, district office) serving each State may consolidate the employment and wages data for that State with the data reported to the State in which the headquarters is located. As a result of these reporting rules, the number of reporting units is always larger than the number of employers (or government agencies) but smaller than the number of actual establishments (or installations).

Data reported for the first quarter are tabulated into **size** categories ranging from worksites of very small size to those with 1,000 employees or more. The size category is determined by the establishment's March employment level. It is important to note that each establishment of a multi-establishment firm is tabulated separately into the appropriate size category. The total employment level of the reporting multi-establishment firm is not used in the size tabulation.

Covered employers in most States report total **wages** paid during the calendar quarter, regardless of when the services were performed. A few State laws, however, specify that wages be reported for, or based on the period during which services are performed rather than the period during which compensation is paid. Under most State laws or regulations, wages include bonuses, stock options, the cash value of meals and lodging, tips and other gratuities, and, in some States, employer contributions to certain deferred compensation plans such as 401(k) plans.

Covered employer contributions for old-age, survivors, and disability insurance (OASDI), health insurance, unemployment insurance, workers' compensation, and private pension and welfare funds are not reported as wages. Employee contributions for the same purposes, however, as well as money withheld for income taxes, union dues, and so forth, are reported even though they are deducted from the worker's gross pay.

Wages of covered Federal workers represent the gross amount of all payrolls for all pay periods ending within the quarter. This includes cash allowances, the cash equivalent of any type of remuneration, severance pay, withholding taxes, and retirement deductions. Federal employee remuneration generally covers the same types of services as for workers in private industry.

Average annual wages per employee for any given industry are computed by dividing total annual wages by annual average em-

ployment. A further division by 52 yields average weekly wages per employee. Annual pay data only approximate annual earnings because an individual may not be employed by the same employer all year or may work for more than one employer at a time.

Average weekly or annual pay is affected by the ratio of full-time to part-time workers as well as the number of individuals in high-paying and low-paying occupations. When average pay levels between States and industries are compared, these factors should be taken into consideration. For example, industries characterized by high proportions of part-time workers will show average wage levels appreciably less than the weekly pay levels of regular full-time employees in these industries. The opposite effect characterizes industries with low proportions of part-time workers, or industries that typically schedule heavy weekend and overtime work. Average wage data also may be influenced by work stoppages, labor turnover rates, retroactive payments, seasonal factors, bonus payments, and so on.

Notes on the data

To insure the highest possible quality of data, State employment security agencies verify with employers and update, if necessary, the industry, location, and ownership classification of all establishments on a 3-year cycle. Changes in establishment classification codes resulting from the verification process are introduced with the data reported for the first quarter of the year. Changes resulting from improved employer reporting also are introduced in the first quarter. For these reasons, some data, especially at more detailed geographic levels, may not be strictly comparable with earlier years.

The 1999 county data used to calculate the 1999–2000 changes were adjusted for changes in industry and county classification to make them comparable to data for 2000. As a result, the adjusted 1999 data differ to some extent from the data available on the Internet at:

http://www.bls.gov/cew/home.htm.

County definitions are assigned according to Federal Information Processing Standards Publications as issued by the National Institute of Standards and Technology. Areas shown as counties include those designated as independent cities in some jurisdictions and, in Alaska, those areas designated by the Census Bureau where counties have not been created. County data also are presented for the New England States for comparative purposes, even though townships are the more common designation used in New England

(and New Jersey).

For additional information on the covered employment and wage data, contact the Division of Administrative Statistics and Labor Turnover at (202) 691–6567.

Compensation and Wage Data

(Tables 1–3; 25–31)

COMPENSATION AND WAGE DATA are gathered by the Bureau from business establishments, State and local governments, labor unions, collective bargaining agreements on file with the Bureau, and secondary sources.

Employment Cost Index

Description of the series

The **Employment Cost Index** (ECI) is a quarterly measure of the rate of change in compensation per hour worked and includes wages, salaries, and employer costs of employee benefits. It uses a fixed market basket of labor—similar in concept to the Consumer Price Index's fixed market basket of goods and services—to measure change over time in employer costs of employing labor.

Statistical series on total compensation costs, on wages and salaries, and on benefit costs are available for private nonfarm workers excluding proprietors, the self-employed, and household workers. The total compensation costs and wages and salaries series are also available for State and local government workers and for the civilian nonfarm economy, which consists of private industry and State and local government workers combined. Federal workers are excluded.

The Employment Cost Index probability sample consists of about 4,400 private nonfarm establishments providing about 23,000 occupational observations and 1,000 State and local government establishments providing 6,000 occupational observations selected to represent total employment in each sector. On average, each reporting unit provides wage and compensation information on five well-specified occupations. Data are collected each quarter for the pay period including the 12th day of March, June, September, and December.

Beginning with June 1986 data, fixed employment weights from the 1980 Census of Population are used each quarter to calculate the civilian and private indexes and the index for State and local governments. (Prior to June 1986, the employment weights are from the 1970 Census of Popu-

lation.) These fixed weights, also used to derive all of the industry and occupation series indexes, ensure that changes in these indexes reflect only changes in compensation, not employment shifts among industries or occupations with different levels of wages and compensation. For the bargaining status, region, and metropolitan/non-metropolitan area series, however, employment data by industry and occupation are not available from the census. Instead, the 1980 employment weights are reallocated within these series each quarter based on the current sample. Therefore, these indexes are not strictly comparable to those for the aggregate, industry, and occupation series.

Definitions

Total compensation costs include wages, salaries, and the employer's costs for employee benefits.

Wages and salaries consist of earnings before payroll deductions, including production bonuses, incentive earnings, commissions, and cost-of-living adjustments.

Benefits include the cost to employers for paid leave, supplemental pay (including nonproduction bonuses), insurance, retirement and savings plans, and legally required benefits (such as Social Security, workers' compensation, and unemployment insurance).

Excluded from wages and salaries and employee benefits are such items as payment-in-kind, free room and board, and tips.

Notes on the data

The Employment Cost Index for changes in wages and salaries in the private nonfarm economy was published beginning in 1975. Changes in total compensation cost—wages and salaries and benefits combined—were published beginning in 1980. The series of changes in wages and salaries and for total compensation in the State and local government sector and in the civilian nonfarm economy (excluding Federal employees) were published beginning in 1981. Historical indexes (June 1981=100) are available on the Internet:

http://www.bls.gov/ect/

FOR ADDITIONAL INFORMATION on the Employment Cost Index, contact the Office of Compensation Levels and Trends: (202) 691–6199.

Employee Benefits Survey

Description of the series

Employee benefits data are obtained from the Employee Benefits Survey, an annual

survey of the incidence and provisions of selected benefits provided by employers. The survey collects data from a sample of approximately 9,000 private sector and State and local government establishments. The data are presented as a percentage of employees who participate in a certain benefit, or as an average benefit provision (for example, the average number of paid holidays provided to employees per year). Selected data from the survey are presented in table 25 for medium and large private establishments and in table 26 for small private establishments and State and local government.

The survey covers paid leave benefits such as holidays and vacations, and personal, funeral, jury duty, military, family, and sick leave; short-term disability, long-term disability, and life insurance; medical, dental, and vision care plans; defined benefit and defined contribution plans; flexible benefits plans; reimbursement accounts; and unpaid family leave.

Also, data are tabulated on the incidence of several other benefits, such as severance pay, child-care assistance, wellness programs, and employee assistance programs.

Definitions

Employer-provided benefits are benefits that are financed either wholly or partly by the employer. They may be sponsored by a union or other third party, as long as there is some employer financing. However, some benefits that are fully paid for by the employee also are included. For example, longterm care insurance and postretirement life insurance paid entirely by the employee are included because the guarantee of insurability and availability at group premium rates are considered a benefit.

Participants are workers who are covered by a benefit, whether or not they use that benefit. If the benefit plan is financed wholly by employers and requires employees to complete a minimum length of service for eligibility, the workers are considered participants whether or not they have met the requirement. If workers are required to contribute towards the cost of a plan, they are considered participants only if they elect the plan and agree to make the required contributions.

Defined benefit pension plans use predetermined formulas to calculate a retirement benefit (if any), and obligate the employer to provide those benefits. Benefits are generally based on salary, years of service, or both.

Defined contribution plans generally specify the level of employer and employee contributions to a plan, but not the formula

for determining eventual benefits. Instead, individual accounts are set up for participants, and benefits are based on amounts credited to these accounts.

Tax-deferred savings plans are a type of defined contribution plan that allow participants to contribute a portion of their salary to an employer-sponsored plan and defer income taxes until withdrawal.

Flexible benefit plans allow employees to choose among several benefits, such as life insurance, medical care, and vacation days, and among several levels of coverage within a given benefit.

Notes on the data

Surveys of employees in medium and large establishments conducted over the 1979–86 period included establishments that employed at least 50, 100, or 250 workers, depending on the industry (most service industries were excluded). The survey conducted in 1987 covered only State and local governments with 50 or more employees. The surveys conducted in 1988 and 1989 included medium and large establishments with 100 workers or more in private industries. All surveys conducted over the 1979–89 period excluded establishments in Alaska and Hawaii, as well as part-time employees.

Beginning in 1990, surveys of State and local governments and small private establishments were conducted in even-numbered years, and surveys of medium and large establishments were conducted in odd-numbered years. The small establishment survey includes all private nonfarm establishments with fewer than 100 workers, while the State and local government survey includes all governments, regardless of the number of workers. All three surveys include full- and part-time workers, and workers in all 50 States and the District of Columbia.

FOR ADDITIONAL INFORMATION on the Employee Benefits Survey, contact the Office of Compensation Levels and Trends on the Internet: **http://www.bls.gov/ebs/**

Work stoppages

Description of the series

Data on work stoppages measure the number and duration of major strikes or lockouts (involving 1,000 workers or more) occurring during the month (or year), the number of workers involved, and the amount of work time lost because of stoppage. These data are presented in table 27.

Data are largely from a variety of published sources and cover only establishments

directly involved in a stoppage. They do not measure the indirect or secondary effect of stoppages on other establishments whose employees are idle owing to material shortages or lack of service.

Definitions

Number of stoppages: The number of strikes and lockouts involving 1,000 workers or more and lasting a full shift or longer.

Workers involved: The number of workers directly involved in the stoppage.

Number of days idle: The aggregate number of workdays lost by workers involved in the stoppages.

Days of idleness as a percent of estimated working time: Aggregate workdays lost as a percent of the aggregate number of standard workdays in the period multiplied by total employment in the period.

Notes on the data

This series is not comparable with the one terminated in 1981 that covered strikes involving six workers or more.

FOR ADDITIONAL INFORMATION on work stoppages data, contact the Office of Compensation and Working Conditions: (202) 691–6282, or the Internet:
http:/www.bls.gov/cba/

Price Data

(Tables 2; 32–42)

PRICE DATA are gathered by the Bureau of Labor Statistics from retail and primary markets in the United States. Price indexes are given in relation to a base period—1982 = 100 for many Producer Price Indexes, 1982–84 = 100 for many Consumer Price Indexes (unless otherwise noted), and 1990 = 100 for International Price Indexes.

Consumer Price Indexes

Description of the series

The **Consumer Price Index** (CPI) is a measure of the average change in the prices paid by urban consumers for a fixed market basket of goods and services. The CPI is calculated monthly for two population groups, one consisting only of urban households whose primary source of income is derived from the employment of wage earners and clerical workers, and the other consisting of all urban households. The wage earner index (CPI-W) is a continuation of the historic index that was introduced well over a half-century ago for use in wage negotiations. As

new uses were developed for the CPI in recent years, the need for a broader and more representative index became apparent. The all-urban consumer index (CPI-U), introduced in 1978, is representative of the 1993–95 buying habits of about 87 percent of the noninstitutional population of the United States at that time, compared with 32 percent represented in the CPI-W. In addition to wage earners and clerical workers, the CPI-U covers professional, managerial, and technical workers, the self-employed, short-term workers, the unemployed, retirees, and others not in the labor force.

The CPI is based on prices of food, clothing, shelter, fuel, drugs, transportation fares, doctors' and dentists' fees, and other goods and services that people buy for day-to-day living. The quantity and quality of these items are kept essentially unchanged between major revisions so that only price changes will be measured. All taxes directly associated with the purchase and use of items are included in the index.

Data collected from more than 23,000 retail establishments and 5,800 housing units in 87 urban areas across the country are used to develop the "U.S. city average." Separate estimates for 14 major urban centers are presented in table 33. The areas listed are as indicated in footnote 1 to the table. The area indexes measure only the average change in prices for each area since the base period, and do not indicate differences in the level of prices among cities.

Notes on the data

In January 1983, the Bureau changed the way in which homeownership costs are meaured for the CPI-U. A rental equivalence method replaced the asset-price approach to homeownership costs for that series. In January 1985, the same change was made in the CPI-W. The central purpose of the change was to separate shelter costs from the investment component of home-ownership so that the index would reflect only the cost of shelter services provided by owner-occupied homes. An updated CPI-U and CPI-W were introduced with release of the January 1987 and January 1998 data.

FOR ADDITIONAL INFORMATION on consumer prices, contact the Division of Consumer Prices and Price Indexes: (202) 691–7000.

Producer Price Indexes

Description of the series

Producer Price Indexes (PPI) measure av-

erage changes in prices received by domestic producers of commodities in all stages of processing. The sample used for calculating these indexes currently contains about 3,200 commodities and about 80,000 quotations per month, selected to represent the movement of prices of all commodities produced in the manufacturing; agriculture, forestry, and fishing; mining; and gas and electricity and public utilities sectors. The stage-of-processing structure of PPI organizes products by class of buyer and degree of fabrication (that is, finished goods, intermediate goods, and crude materials). The traditional commodity structure of PPI organizes products by similarity of end use or material composition. The industry and product structure of PPI organizes data in accordance with the Standard Industrial Classification (SIC) and the product code extension of the SIC developed by the U.S. Bureau of the Census.

To the extent possible, prices used in calculating Producer Price Indexes apply to the first significant commercial transaction in the United States from the production or central marketing point. Price data are generally collected monthly, primarily by mail questionnaire. Most prices are obtained directly from producing companies on a voluntary and confidential basis. Prices generally are reported for the Tuesday of the week containing the 13th day of the month.

Since January 1992, price changes for the various commodities have been averaged together with implicit quantity weights representing their importance in the total net selling value of all commodities as of 1987. The detailed data are aggregated to obtain indexes for stage-of-processing groupings, commodity groupings, durability-of-product groupings, and a number of special composite groups. All Producer Price Index data are subject to revision 4 months after original publication.

FOR ADDITIONAL INFORMATION on producer prices, contact the Division of Industrial Prices and Price Indexes: (202) 691–7705.

International Price Indexes

Description of the series

The **International Price Program** produces monthly and quarterly export and import price indexes for nonmilitary goods and services traded between the United States and the rest of the world. The export price index provides a measure of price change for all products sold by U.S. residents to foreign buyers. ("Residents" is defined as in the national income accounts; it includes corporations, businesses, and individuals, but does not require the organizations to be U.S. owned nor the individuals to have U.S. citizenship.) The import price index provides a measure of price change for goods purchased from other countries by U.S. residents.

The product universe for both the import and export indexes includes raw materials, agricultural products, semifinished manufactures, and finished manufactures, including both capital and consumer goods. Price data for these items are collected primarily by mail questionnaire. In nearly all cases, the data are collected directly from the exporter or importer, although in a few cases, prices are obtained from other sources.

To the extent possible, the data gathered refer to prices at the U.S. border for exports and at either the foreign border or the U.S. border for imports. For nearly all products, the prices refer to transactions completed during the first week of the month. Survey respondents are asked to indicate all discounts, allowances, and rebates applicable to the reported prices, so that the price used in the calculation of the indexes is the actual price for which the product was bought or sold.

In addition to general indexes of prices for U.S. exports and imports, indexes are also published for detailed product categories of exports and imports. These categories are defined according to the five-digit level of detail for the Bureau of Economic Analysis End-use Classification, the three-digit level for the Standard Industrial Classification (SITC), and the four-digit level of detail for the Harmonized System. Aggregate import indexes by coun-try or region of origin are also available.

BLS publishes indexes for selected categories of internationally traded services, calculated on an international basis and on a balance-of-payments basis.

Notes on the data

The export and import price indexes are weighted indexes of the Laspeyres type. The trade weights currently used to compute both indexes relate to 2000.

Because a price index depends on the same items being priced from period to period, it is necessary to recognize when a product's specifications or terms of transaction have been modified. For this reason, the Bureau's questionnaire requests detailed descriptions of the physical and functional characteristics of the products being priced, as well as information on the number of units bought or sold, discounts, credit terms, packaging, class of buyer or seller, and so forth. When there are changes in either the specifications or terms of transaction of a product, the dollar value of each change is deleted from the total price change to obtain the "pure" change. Once this value is determined, a linking procedure is employed which allows for the continued repricing of the item.

FOR ADDITIONAL INFORMATION on international prices, contact the Division of International Prices: (202) 691–7155.

Productivity Data

(Tables 2; 43–46)

Business sector and major sectors

Description of the series

The productivity measures relate real output to real input. As such, they encompass a family of measures which include single-factor input measures, such as output per hour, output per unit of labor input, or output per unit of capital input, as well as measures of multifactor productivity (output per unit of combined labor and capital inputs). The Bureau indexes show the change in output relative to changes in the various inputs. The measures cover the business, nonfarm business, manufacturing, and nonfinancial corporate sectors.

Corresponding indexes of hourly compensation, unit labor costs, unit nonlabor payments, and prices are also provided.

Definitions

Output per hour of all persons (labor productivity) is the quantity of goods and services produced per hour of labor input. **Output per unit of capital services** (capital productivity) is the quantity of goods and services produced per unit of capital services input. **Multifactor productivity** is the quantity of goods and services produced per combined inputs. For private business and private nonfarm business, inputs include labor and capital units. For manufacturing, inputs include labor, capital, energy, non-energy materials, and purchased business ser-vices.

Compensation per hour is total compensation divided by hours at work. Total compensation equals the wages and salaries of employees plus employers' contributions for social insurance and private benefit plans, plus an estimate of these payments for the self-employed (except for nonfinancial cor-

porations in which there are no self-employed). **Real compensation per hour** is compensation per hour deflated by the change in the Consumer Price Index for All Urban Consumers.

Unit labor costs are the labor compensation costs expended in the production of a unit of output and are derived by dividing compensation by output. **Unit nonlabor payments** include profits, depreciation, interest, and indirect taxes per unit of output. They are computed by subtracting compensation of all persons from current-dollar value of output and dividing by output.

Unit nonlabor costs contain all the components of unit nonlabor payments except unit profits.

Unit profits include corporate profits with inventory valuation and capital consumption adjustments per unit of output.

Hours of all persons are the total hours at work of payroll workers, self-employed persons, and unpaid family workers.

Labor inputs are hours of all persons adjusted for the effects of changes in the education and experience of the labor force.

Capital services are the flow of services from the capital stock used in production. It is developed from measures of the net stock of physical assets—equipment, structures, land, and inventories—weighted by rental prices for each type of asset.

Combined units of labor and capital inputs are derived by combining changes in labor and capital input with weights which represent each component's share of total cost. Combined units of labor, capital, energy, materials, and purchased business services are similarly derived by combining changes in each input with weights that represent each input's share of total costs. The indexes for each input and for combined units are based on changing weights which are averages of the shares in the current and preceding year (the Tornquist index-number formula).

Notes on the data

Business sector output is an annually-weighted index constructed by excluding from real gross domestic product (GDP) the following outputs: general government, nonprofit institutions, paid employees of private households, and the rental value of owner-occupied dwellings. Nonfarm business also excludes farming. Private business and private nonfarm business further exclude government enterprises. The measures are supplied by the U.S. Department of Commerce's Bureau of Economic Analysis. Annual estimates of manufacturing sectoral output are produced by the Bureau of Labor Statistics. Quarterly manufacturing out-

put indexes from the Federal Reserve Board are adjusted to these annual output measures by the BLS. Compensation data are developed from data of the Bureau of Economic Analysis and the Bureau of Labor Statistics. Hours data are developed from data of the Bureau of Labor Statistics.

The productivity and associated cost measures in tables 43–46 describe the relationship between output in real terms and the labor and capital inputs involved in its production. They show the changes from period to period in the amount of goods and services produced per unit of input.

Although these measures relate output to hours and capital services, they do not measure the contributions of labor, capital, or any other specific factor of production. Rather, they reflect the joint effect of many influences, including changes in technology; shifts in the composition of the labor force; capital investment; level of output; changes in the utilization of capacity, energy, material, and research and development; the organization of production; managerial skill; and characteristics and efforts of the work force.

FOR ADDITIONAL INFORMATION on this productivity series, contact the Division of Productivity Research: (202) 691–5606.

Industry productivity measures

Description of the series

The BLS industry productivity data supplement the measures for the business economy and major sectors with annual measures of labor productivity for selected industries at the three- and four-digit levels of the Standard Industrial Classification system. In addition to labor productivity, the industry data also include annual measures of compensation and unit labor costs for three-digit industries and measures of multifactor productivity for three-digit manufacturing industries and railroad transportation. The industry measures differ in methodology and data sources from the productivity measures for the major sectors because the industry measures are developed independently of the National Income and Product Accounts framework used for the major sector measures.

Definitions

Output per hour is derived by dividing an index of industry output by an index of labor input. For most industries, **output** indexes are derived from data on the value of industry out-

put adjusted for price change. For the remaining industries, output indexes are derived from data on the physical quantity of production.

The **labor input** series consist of the hours of all employees (production workers and nonproduction workers), the hours of all persons (paid employees, partners, proprietors, and unpaid family workers), or the number of employees, depending upon the industry.

Unit labor costs represent the labor compensation costs per unit of output produced, and are derived by dividing an index of labor compensation by an index of output. **Labor compensation** includes payroll as well as supplemental payments, including both legally required expenditures and payments for voluntary programs.

Multifactor productivity is derived by dividing an index of industry output by an index of the combined inputs consumed in producing that output. **Combined inputs** include capital, labor, and intermediate purchases. The measure of **capital input** used represents the flow of services from the capital stock used in production. It is developed from measures of the net stock of physical assets—equipment, structures, land, and inventories. The measure of **intermediate purchases** is a combination of purchased materials, services, fuels, and electricity.

Notes on the data

The industry measures are compiled from data produced by the Bureau of Labor Statistics and the Bureau of the Census, with additional data supplied by other government agencies, trade associations, and other sources.

For most industries, the productivity indexes refer to the output per hour of all employees. For some trade and services industries, indexes of output per hour of all persons (including self-employed) are constructed. For some transportation industries, only indexes of output per employee are prepared.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Industry Productivity Studies: (202) 691–5618.

International Comparisons

(Tables 47–49)

Labor force and unemployment

Description of the series

Tables 47 and 48 present comparative meas-

ures of the labor force, employment, and unemployment—approximating U.S. concepts—for the United States, Canada, Australia, Japan, and several European countries. The unemployment statistics (and, to a lesser extent, employment statistics) published by other industrial countries are not, in most cases, comparable to U.S. unemployment statistics. Therefore, the Bureau adjusts the figures for selected countries, where necessary, for all known major definitional differences. Although precise comparability may not be achieved, these adjusted figures provide a better basis for international comparisons than the figures regularly published by each country. For further information on adjustments and comparability issues, see Constance Sorrentino, "International unemployment rates: how comparable are they?" *Monthly Labor Review*, June 2000, pp. 3-20.

Definitions

For the principal U.S. definitions of the **labor force**, **employment**, and **unemployment**, see the Notes section on Employment and Unemployment Data: Household survey data.

Notes on the data

The adjusted statistics have been adapted to the age at which compulsory schooling ends in each country, rather than to the U.S. standard of 16 years of age and older. Therefore, the adjusted statistics relate to the population aged 16 and older in France, Sweden, and the United Kingdom; 15 and older in Australia, Japan, Germany, Italy from 1993 onward, and the Netherlands; and 14 and older in Italy prior to 1993. An exception to this rule is that the Canadian statistics for 1976 onward are adjusted to cover ages 16 and older, whereas the age at which compulsory schooling ends remains at 15. The institutional population is included in the denominator of the labor force participation rates and employment-population ratios for Japan and Germany; it is excluded for the United States and the other countries.

In the U.S. labor force survey, persons on layoff who are awaiting recall to their jobs are classified as unemployed. European and Japanese layoff practices are quite different in nature from those in the United States; therefore, strict application of the U.S. definition has not been made on this point. For further information, see *Monthly Labor Review*, December 1981, pp. 8–11.

The figures for one or more recent years for France, Germany, Italy, the Netherlands, and the United Kingdom are calculated using adjustment factors based on labor force sur-

veys for earlier years and are considered preliminary. The recent-year measures for these countries, therefore, are subject to revision whenever data from more current labor force surveys become available.

There are breaks in the data series for the United States (1990, 1994, 1997, 1998, 1999, 2000), Canada (1976) France (1992), Germany (1991), Italy (1991, 1993), the Netherlands (1988), and Sweden (1987).

For the United States, the break in series reflects a major redesign of the labor force survey questionnaire and collection methodology introduced in January 1994. Revised population estimates based on the 1990 census, adjusted for the estimated undercount, also were incorporated. In 1996, previously published data for the 1990–93 period were revised to reflect the 1990 census-based population controls, adjusted for the undercount. In 1997, revised population controls were introduced into the household survey. Therefore, the data are not strictly conparable with prior years. In 1998, new composite estimation procedures and minor revisions in population controls were introduced into the household survey. Therefore, the data are not strictly comparable with data for 1997 and earlier years. See the Notes section on Employment and Unemployment Data of this *Review*.

BLS recently introduced a new adjusted series for Canada. Beginning with the data for 1976, Canadian data are adjusted to more closely approximate U.S. concepts. Adjustments are made to the unemployed and labor force to exclude: (1) 15-year-olds; (2) passive jobseekers (persons only reading newspaper ads as their method of job search); (3) persons waiting to start a new job who did not seek work in the past 4 weeks; and (4) persons unavailable for work due to personal or family responsibilities. An adjustment is made to include full-tine students looking for full-time work. The impact of the adjustments was to lower the annual average unemployment rate by 0.1–0.4 percentage point in the 1980s and 0.4–1.0 percentage point in the 1990s.

For France, the 1992 break reflects the substitution of standardized European Union Statistical Office (EUROSTAT) unemployment statistics for the unemployment data estimated according to the International Labor Office (ILO) definition and published in the Organization for Economic Cooperation and Development (OECD) annual yearbook and quarterly update. This change was made because the EUROSTAT data are more up-to-date than the OECD figures. Also, since 1992, the EUROSTAT definitions are closer to the U.S. definitions than they were in prior years. The impact of this revision was to lower the un-

employment rate by 0.1 percentage point in 1992 and 1993, by 0.4 percentage point in 1994, and 0.5 percentage point in 1995.

For Germany, the data for 1991 onward refer to unified Germany. Data prior to 1991 relate to the former West Germany. The impact of including the former East Germany was to increase the unemployment rate from 4.3 to 5.6 percent in 1991.

For Italy, the 1991 break reflects a revision in the method of weighting sample data. The impact was to increase the unemployment rate by approximately 0.3 percentage point, from 6.6 to 6.9 percent in 1991.

In October 1992, the survey methodology was revised and the definition of unemployment was changed to include only those who were actively looking for a job within the 30 days preceding the survey and who were available for work. In addition, the lower age limit for the labor force was raised from 14 to 15 years. (Prior to these changes, BLS adjusted Italy's published unemployment rate downward by excluding from the unemployed those persons who had not actively sought work in the past 30 days.) The break in the series also reflects the incorporation of the 1991 population census results. The impact of these changes was to raise Italy's adjusted unemployment rate by approximately 1.2 percentage points, from 8.3 to 9.5 percent in fourth-quarter 1992. These changes did not affect employment significantly, except in 1993. Estimates by the Italian Statistical Office indicate that employment declined by about 3 percent in 1993, rather than the nearly 4 percent indicated by the data shown in table 44. This difference is attributable mainly to the incorporation of the 1991 population benchmarks in the 1993 data. Data for earlier years have not been adjusted to incorporate the 1991 census results.

For the Netherlands, a new survey questionnaire was introduced in 1992 that allowed for a closer application of ILO guidelines. EUROSTAT has revised the Dutch series back to 1988 based on the 1992 changes. The 1988 revised unemployment rate is 7.6 percent; the previous estimate for the same year was 9.3 percent.

There have been two breaks in series in the Swedish labor force survey, in 1987 and 1993. Adjustments have been made for the 1993 break back to 1987. In 1987, a new questionnaire was introduced. Questions regarding current availability were added and the period of active workseeking was reduced from 60 days to 4 weeks. These changes lowered Sweden's 1987 unemployment rate by 0.4 percentage point, from 2.3 to 1.9 percent. In 1993, the measurement period for the labor force sur-

vey was changed to represent all 52 weeks of the year rather than one week each month and a new adjustment for population totals was introduced. The impact was to raise the unemployment rate by approximately 0.5 percentage point, from 7.6 to 8.1 percent. Statistics Sweden revised its labor force survey data for 1987–92 to take into account the break in 1993. The adjustment raised the Swedish unemployment rate by 0.2 percentage point in 1987 and gradually rose to 0.5 percentage point in 1992.

Beginning with 1987, BLS has adjusted the Swedish data to classify students who also sought work as unemployed. The impact of this change was to increase the adjusted unemployment rate by 0.1 percentage point in 1987 and by 1.8 percentage points in 1994, when unemployment was higher. In 1998, the adjusted unemployment rate had risen from 6.5 to 8.4 percent due to the adjustment to include students.

The net effect of the 1987 and 1993 changes and the BLS adjustment for students seeking work lowered Sweden's 1987 unemployment rate from 2.3 to 2.2 percent.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Foreign Labor Statistics: (202) 691–5654.

Manufacturing productivity and labor costs

Description of the series

Table 49 presents comparative indexes of manufacturing labor productivity (output per hour), output, total hours, compensation per hour, and unit labor costs for the United States, Canada, Japan, and nine European countries. These measures are trend comparisons—that is, series that measure changes over time—rather than level comparisons. There are greater technical problems in comparing the levels of manufacturing output among countries.

BLS constructs the comparative indexes from three basic aggregate measures—output, total labor hours, and total compensation. The hours and compensation measures refer to all employed persons (wage and salary earners plus self-employed persons and unpaid family workers) in the United States, Canada, Japan, France, Germany, Norway, and Sweden, and to all employees (wage and salary earners) in the other countries.

Definitions

Output, in general, refers to value added in

manufacturing from the national accounts of each country. However, the output series for Japan prior to 1970 is an index of industrial production, and the national accounts measures for the United Kingdom are essentially identical to their indexes of industrial production.

The 1977–97 output data for the United States are the gross product originating (value added) measures prepared by the Bureau of Economic Analysis of the U.S. Department of Commerce. Comparable manufacturing output data currently are not available prior to 1977.

U.S. gross product originating is a chain-type annual-weighted series. (For more information on the U.S. measure, see Robert E. Yuskavage, "Improved Estimates of Gross Product by Industry, 1959–94," *Survey of Current Business*, August 1996, pp. 133–55.) The Japanese value added series is based upon one set of fixed price weights for the years 1970 through 1997. Output series for the other foreign economies also employ fixed price weights, but the weights are updated periodically (for example, every 5 or 10 years).

To preserve the comparability of the U.S. measures with those for other economies, BLS uses gross product originating in manufacturing for the United States for these comparative measures. The gross product originating series differs from the manufacturing output series that BLS publishes in its news releases on quarterly measures of U.S. productivity and costs (and that underlies the measures that appear in tables 43 and 45 in this section). The quarterly measures are on a "sectoral output" basis, rather than a value-added basis. Sectoral output is gross output less intrasector transactions.

Total labor hours refers to hours worked in all countries. The measures are developed from statistics of manufacturing employment and average hours. The series used for France (from 1970 forward), Norway, and Sweden are official series published with the national accounts. Where official total hours series are not available, the measures are developed by BLS using employment figures published with the national accounts, or other comprehensive employment series, and estimates of annual hours worked. For Germany, BLS uses estimates of average hours worked developed by a research institute connected to the Ministry of Labor for use with the national accounts employment figures. For the other countries, BLS constructs its own estimates of average hours.

Denmark has not published estimates of average hours for 1994–97; therefore, the BLS measure of labor input for Denmark ends in 1993.

Total compensation (labor cost) includes all payments in cash or in-kind made directly to employees plus employer expenditures for legally required insurance programs and contractual and private benefit plans. The measures are from the national accounts of each country, except those for Belgium, which are developed by BLS using statistics on employment, average hours, and hourly compensation. For Canada, France, and Sweden, compensation is increased to account for other significant taxes on payroll or employment. For the United Kingdom, compensation is reduced between 1967 and 1991 to account for employment-related subsidies. Self-employed workers are included in the all-employed-persons measures by assuming that their hourly compensation is equal to the average for wage and salary employees.

Notes on the data

In general, the measures relate to total manufacturing as defined by the International Standard Industrial Classification. However, the measures for France (for all years) and Italy (beginning 1970) refer to mining and manufacturing less energy-related products, and the measures for Denmark include mining and exclude manufacturing handicrafts from 1960 to 1966.

The measures for recent years may be based on current indicators of manufacturing output (such as industrial production indexes), employment, average hours, and hourly compensation until national accounts and other statistics used for the long-term measures become available.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Foreign Labor Statistics: (202) 691–5654.

Occupational Injury and Illness Data

(Tables 50–51)

Survey of Occupational Injuries and Illnesses

Description of the series

The Survey of Occupational Injuries and Illnesses collects data from employers about their workers' job-related nonfatal injuries and illnesses. The information that employers provide is based on records that they maintain under the Occupational Safety and Health Act of

1970. Self-employed individuals, farms with fewer than 11 employees, employers regulated by other Federal safety and health laws, and Federal, State, and local government agencies are excluded from the survey.

The survey is a Federal-State cooperative program with an independent sample selected for each participating State. A stratified random sample with a Neyman allocation is selected to represent all private industries in the State. The survey is stratified by Standard Industrial Classification and size of employment.

Definitions

Under the Occupational Safety and Health Act, employers maintain records of nonfatal work-related injuries and illnesses that involve one or more of the following: loss of consciousness, restriction of work or motion, transfer to another job, or medical treatment other than first aid.

Occupational injury is any injury such as a cut, fracture, sprain, or amputation that results from a work-related event or a single, instantaneous exposure in the work environment.

Occupational illness is an abnormal condition or disorder, other than one resulting from an occupational injury, caused by exposure to factors associated with employment. It includes acute and chronic illnesses or disease which may be caused by inhalation, absorption, ingestion, or direct contact.

Lost workday injuries and illnesses are cases that involve days away from work, or days of restricted work activity, or both.

Lost workdays include the number of workdays (consecutive or not) on which the employee was either away from work or at work in some restricted capacity, or both, because of an occupational injury or illness. BLS measures of the number and incidence rate of lost workdays were discontinued beginning with the 1993 survey. The number of days away from work or days of restricted work activity does not include the day of injury or onset of illness or any days on which the employee would not have worked, such as a Federal holiday, even though able to work.

Incidence rates are computed as the number of injuries and/or illnesses or lost work days per 100 full-time workers.

Notes on the data

The definitions of occupational injuries and illnesses are from *Recordkeeping Guidelines for Occupational Injuries and Illnesses* (U.S. Department of Labor, Bureau of Labor Statistics, September 1986).

Estimates are made for industries and employment size classes for total recordable cases, lost workday cases, days away from work cases, and nonfatal cases without lost workdays. These data also are shown separately for injuries. Illness data are available for seven categories: occupational skin diseases or disorders, dust diseases of the lungs, respiratory conditions due to toxic agents, poisoning (systemic effects of toxic agents), disorders due to physical agents (other than toxic materials), disorders associated with repeated trauma, and all other occupational illnesses.

The survey continues to measure the number of new work-related illness cases which are recognized, diagnosed, and reported during the year. Some conditions, for example, long-term latent illnesses caused by exposure to carcinogens, often are difficult to relate to the workplace and are not adequately recognized and reported. These long-term latent illnesses are believed to be understated in the survey's illness measure. In contrast, the overwhelming majority of the reported new illnesses are those which are easier to directly relate to workplace activity (for example, contact dermatitis and carpal tunnel syndrome).

Most of the estimates are in the form of incidence rates, defined as the number of injuries and illnesses per 100 equivalent full-time workers. For this purpose, 200,000 employee hours represent 100 employee years (2,000 hours per employee). Full detail on the available measures is presented in the annual bulletin, *Occupational Injuries and Illnesses: Counts, Rates, and Characteristics*.

Comparable data for more than 40 States and territories are available from the BLS Office of Safety, Health and Working Conditions. Many of these States publish data on State and local government employees in addition to private industry data.

Mining and railroad data are furnished to BLS by the Mine Safety and Health Administration and the Federal Railroad Administration. Data from these organizations are included in both the national and State data published annually.

With the 1992 survey, BLS began publishing details on serious, nonfatal incidents resulting in days away from work. Included are some major characteristics of the injured and ill workers, such as occupation, age, gender, race, and length of service, as well as the circumstances of their injuries and illnesses (nature of the disabling condition, part of body affected, event and exposure, and the source directly producing the condition). In general, these data are available nationwide for detailed industries and for individual States at more aggregated industry levels.

FOR ADDITIONAL INFORMATION on occupational injuries and illnesses, contact the Office of Occupational Safety, Health and Working Conditions at (202) 691–6180, or access the Internet at:

http://www.bls.gov/iip/

Census of Fatal Occupational Injuries

The Census of Fatal Occupational Injuries compiles a complete roster of fatal job-related injuries, including detailed data about the fatally injured workers and the fatal events. The program collects and cross checks fatality information from multiple sources, including death certificates, State and Federal workers' compensation reports, Occupational Safety and Health Administration and Mine Safety and Health Administration records, medical examiner and autopsy reports, media accounts, State motor vehicle fatality records, and follow-up questionnaires to employers.

In addition to private wage and salary workers, the self-employed, family members, and Federal, State, and local government workers are covered by the program. To be included in the fatality census, the decedent must have been employed (that is working for pay, compensation, or profit) at the time of the event, engaged in a legal work activity, or present at the site of the incident as a requirement of his or her job.

Definition

A fatal work injury is any intentional or unintentional wound or damage to the body resulting in death from acute exposure to energy, such as heat or electricity, or kinetic energy from a crash, or from the absence of such essentials as heat or oxygen caused by a specific event or incident or series of events within a single workday or shift. Fatalities that occur during a person's commute to or from work are excluded from the census, as well as work-related illnesses, which can be difficult to identify due to long latency periods.

Notes on the data

Twenty-eight data elements are collected, coded, and tabulated in the fatality program, including information about the fatally injured worker, the fatal incident, and the machinery or equipment involved. Summary worker demographic data and event charac-

teristics are included in a national news re-
lease that is available about 8 months after
the end of the reference year. The Census of
Fatal Occupational Injuries was initiated in
1992 as a joint Federal-State effort. Most
States issue summary information at the time
of the national news release.

FOR ADDITIONAL INFORMATION on the
Census of Fatal Occupational Injuries con-
tact the BLS Office of Safety, Health, and
Working Conditions at (202) 691–6175, or
the Internet at: **http://www.bls.gov/iip/**

Bureau of Labor Statistics Internet

The Bureau of Labor Statistics World Wide Web site on the Internet contains a range of
data on consumer and producer prices, employment and unemployment, occupational com-
pensation, employee benefits, workplace injuries and illnesses, and productivity. The
homepage can be accessed using any Web browser:

http://www.bls.gov

Also, some data can be accessed through anonymous FTP or Gopher at

stats.bls.gov

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1. Labor market indicators

Selected Indicators	2000	2001	2000				2001				2002
			I	II	III	IV	I	II	III	IV	I
Employment data											
Employment status of the civilian noninstitutionalized population (household survey):[1]											
Labor force participation rate............................	67.2	66.9	67.3	67.3	67.0	67.1	67.2	66.9	66.8	66.9	66.5
Employment-population ratio.............................	64.5	63.8	64.6	64.6	64.3	64.4	64.4	63.9	63.6	63.1	62.8
Unemployment rate..	4.0	4.8	4.0	4.0	4.1	4.0	4.2	4.5	4.8	5.6	5.6
Men...	3.9	4.8	3.9	3.9	3.9	4.0	4.2	4.6	4.9	5.7	5.7
16 to 24 years...	9.7	11.4	9.7	9.7	9.8	9.6	10.6	11.2	11.5	12.7	12.9
25 years and over......................................	2.8	3.6	2.8	2.8	2.8	2.9	3.1	3.4	3.7	4.4	4.5
Women...	4.1	4.7	4.2	4.1	4.2	4.0	4.1	4.3	4.8	5.5	5.5
16 to 24 years...	8.9	9.7	9.5	9.0	8.5	8.4	8.7	9.2	10.0	10.6	11.0
25 years and over......................................	3.2	3.7	3.1	3.2	3.3	3.0	3.3	3.4	3.7	4.4	4.4
Employment, nonfarm (payroll data), in thousands:[1]											
Total..	131,759	132,212	130,984	131,854	131,927	132,264	132,559	132,483	132,358	131,502	131,202
Private sector..	111,079	111,339	110,456	110,917	111,293	111,669	111,886	111,702	111,385	110,480	110,111
Goods-producing......................................	25,709	25,121	25,704	25,711	25,732	25,704	25,621	25,310	24,991	14,590	24,225
Manufacturing..	18,469	17,698	18,504	18,510	18,487	18,378	18,188	17,882	17,556	17,174	16,874
Service-producing....................................	106,050	107,090	105,280	106,143	106,195	106,560	106,938	107,173	107,367	106,912	106,978
Average hours:											
Private sector..	34.5	34.2	34.5	34.5	34.4	34.3	34.3	34.2	34.1	34.1	34.1
Manufacturing...	41.6	40.7	41.8	41.8	41.5	41.1	41.0	40.8	40.7	40.5	40.8
Overtime..	4.6	3.9	4.7	4.7	4.5	4.3	4.1	3.9	4.0	3.8	4.0
Employment Cost Index[2]											
Percent change in the ECI, compensation:											
All workers (excluding farm, household and Federal workers)......	4.1	4.1	1.3	1.0	1.0	.7	1.3	.9	1.2	.8	1.0
Private industry workers................................	4.4	4.2	1.5	1.2	.9	.7	1.4	1.0	.9	.8	1.1
Goods-producing[3].....................................	4.4	3.8	1.6	1.2	.9	.6	1.3	.9	.7	.8	1.2
Service-producing[3]....................................	4.4	4.3	1.4	1.2	1.0	.7	1.4	1.0	1.0	.8	1.1
State and local government workers.........................	3.0	4.2	.6	.3	1.3	.7	.9	.6	2.1	.6	.6
Workers by bargaining status (private industry):											
Union...	4.0	4.2	1.3	1.0	1.2	.5	.7	1.1	1.0	1.4	1.1
Nonunion...	4.4	4.1	1.5	1.2	1.0	.7	1.5	1.0	.9	.7	1.1

[1] Quarterly data seasonally adjusted.

[2] Annual changes are December-to-December changes. Quarterly changes are calculated using the last month of each quarter.

[3] Goods-producing industries include mining, construction, and manufacturing. Service-producing industries include all other private sector industries.

2. Annual and quarterly percent changes in compensation, prices, and productivity

Selected measures	2000	2001	2000				2001				2002
			I	II	III	IV	I	II	III	IV	I
Compensation data[1,2]											
Employment Cost Index—compensation (wages, salaries, benefits):											
Civilian nonfarm	4.1	4.1	1.3	1.0	1.0	0.7	1.3	0.9	1.2	0.8	1.0
Private nonfarm	4.4	4.2	1.5	1.2	.9	.7	1.4	1.0	.9	.8	1.1
Employment Cost Index—wages and salaries:											
Civilian nonfarm	3.8	3.7	1.1	1.0	1.1	.6	1.1	.9	1.0	.7	.9
Private nonfarm	3.9	3.8	1.2	1.0	1.0	.6	1.2	1.0	.8	.8	.9
Price data[1]											
Consumer Price Index (All Urban Consumers): All Items	1.6	3.4	1.7	.7	.8	.2	1.3	1.0	.2	−.9	.7
Producer Price Index:											
Finished goods	3.5	−1.8	1.5	1.8	.6	.4	.9	.8	−.3	−3.2	1.1
Finished consumer goods	4.3	−2.4	1.9	1.3	.8	.1	1.2	1.0	−.3	−4.3	1.5
Capital equipment	1.2	1.0	.1	.1	−7.2	1.1	−.1	−7.1	−.1	.1	2.9
Intermediate materials, supplies, and components	4.0	−.2	1.8	1.4	1.0	−.3	.2	.6	−1.0	−3.6	.9
Crude materials	31.1	−8.8	9.0	−6.0	2.1	9.4	−3.5	−6.6	−12.0	−12.2	8.0
Productivity data[3]											
Output per hour of all persons:											
Business sector	3.4	1.8	−.1	7.7	1.2	3.0	−.2	2.2	.7	5.4	8.3
Nonfarm business sector	3.3	1.8	.0	6.7	1.6	2.3	−.1	2.1	1.1	5.5	8.4
Nonfinancial corporations[4]	3.1	−	2.8	5.6	2.6	.7	.5	3.3	.9	11.2	6.7

[1] Annual changes are December-to-December changes. Quarterly changes are calculated using the last month of each quarter. Compensation and price data are not seasonally adjusted, and the price data are not compounded.

[2] Excludes Federal and private household workers.

[3] Annual rates of change are computed by comparing annual averages. Quarterly per- cent changes reflect annual rates of change in quarterly indexes. The data are seasonally adjusted.

[4] Output per hour of all employees.

3. Alternative measures of wage and compensation changes

Components	Quarterly average					Four quarters ending				
	2001				2002	2001				2002
	I	II	III	IV	I	I	II	III	IV	I
Average hourly compensation:[1]										
All persons, business sector	5.1	5.2	3.3	2.3	2.9	7.6	6.6	5.8	4.0	3.4
All persons, nonfarm business sector	4.9	4.7	3.7	2.3	2.8	7.3	6.5	5.5	3.9	3.4
Employment Cost Index—compensation:										
Civilian nonfarm[2]	1.3	.9	1.2	.8	1.0	4.1	3.9	4.1	4.1	3.9
Private nonfarm	1.4	1.0	.9	.8	1.1	4.2	4.0	4.0	4.2	3.9
Union	.7	1.1	1.0	1.4	1.1	3.4	3.5	3.4	4.2	4.7
Nonunion	1.5	1.0	.9	.7	1.1	4.3	4.2	4.1	4.1	3.8
State and local governments	.9	.6	2.1	.6	.6	3.3	3.6	4.4	4.2	3.9
Employment Cost Index—wages and salaries:										
Civilian nonfarm[2]	1.1	.9	1.0	.7	.9	3.8	3.7	3.6	3.7	3.5
Private nonfarm	1.2	1.0	.8	.8	.9	3.8	3.8	3.6	3.8	3.5
Union	.6	1.1	1.0	1.6	.7	3.6	3.8	3.6	4.4	4.4
Nonunion	1.2	.9	.8	.7	1.0	3.9	3.7	3.6	3.6	3.4
State and local governments	.7	.5	1.9	.5	.5	3.5	3.7	3.9	3.6	3.4

[1] Seasonally adjusted. "Quarterly average" is percent change from a quarter ago, at an annual rate.

[2] Excludes Federal and household workers.

4. Employment status of the population, by sex, age, race, and Hispanic origin, monthly data seasonally adjusted

[Numbers in thousands]

Employment status	Annual average 2000	Annual average 2001	2001 Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	2002 Jan.	Feb.	Mar.	Apr.
TOTAL															
Civilian noninstitutional population[1]	209,699	211,864	211,348	211,525	211,725	211,921	212,135	212,357	212,581	212,767	212,927	213,089	142,211	142,005	142,570
Civilian labor force	140,863	141,815	141,734	141,445	141,468	141,651	141,380	142,068	142,280	142,279	141,390	141,390	134,319	133,894	133,976
Participation rate	67.2	66.9	67.1	66.9	66.8	66.8	66.6	66.9	66.9	66.9	66.8	66.4	63.0	62.8	62.8
Employed	135,208	135,073	135,424	135,235	135,003	135,106	134,408	135,004	134,615	134,253	134,055	133,468	134,319	133,433	133,433
Employment-population ratio[2]	64.5	63.8	64.1	63.9	63.8	63.8	63.4	63.6	63.3	63.1	63.0	62.6	63.0	62.5	62.5
Unemployed	5,665	6,742	6,310	6,210	6,465	6,545	6,972	7,064	7,665	8,026	8,259	7,922	7,891	8,111	8,594
Unemployment rate	4.0	4.8	4.5	4.4	4.6	4.6	4.9	5.0	5.4	5.6	5.8	5.6	5.5	5.7	6.0
Not in the labor force	68,836	70,050	69,614	70,080	70,257	70,270	70,755	70,289	70,301	70,488	70,613	71,699	70,995	71,243	71,243
Men, 20 years and over															
Civilian noninstitutional population[1]	92,580	93,659	93,410	93,541	93,616	93,708	93,810	93,917	94,015	94,077	94,161	94,228	94,262	94,315	94,315
Civilian labor force	70,930	71,590	71,541	71,468	71,429	71,500	71,523	71,805	71,940	71,935	71,988	71,534	71,718	71,723	72,098
Participation rate	76.6	76.4	76.6	76.3	76.3	76.3	76.2	76.5	76.5	76.5	76.5	75.9	76.1	76.4	76.7
Employed	68,580	68,587	68,720	68,698	68,535	68,610	68,388	68,696	68,486	68,204	68,276	67,818	68,157	68,013	68,193
Employment-population ratio[2]	74.1	73.2	73.6	73.4	73.2	73.2	72.9	83.1	72.8	72.5	72.5	72.0	72.3	72.1	72.2
Agriculture	2,252	2,102	2,105	2,168	2,057	2,035	2,129	2,138	2,132	2,082	2,141	2,207	2,185	2,084	2,213
Nonagricultural industries	66,328	66,485	66,615	66,530	66,478	66,575	66,259	66,558	66,354	66,122	66,135	65,611	65,973	65,929	65,980
Unemployed	2,350	3,003	2,821	2,770	2,894	2,890	3,135	3,109	3,454	3,731	3,712	3,716	3,560	3,710	3,905
Unemployment rate	3.3	4.2	3.9	3.9	4.1	4.0	4.4	4.3	4.8	5.2	5.2	5.2	5.0	5.2	5.4
Women, 20 years and over															
Civilian noninstitutional population[1]	101,078	102,060	101,870	101,938	102,023	102,067	102,165	102,277	102,371	102,438	102,492	102,550	102,651	102,728	102,728
Civilian labor force	61,565	62,148	61,102	62,068	61,961	62,103	62,142	62,222	62,269	62,321	62,481	62,056	62,703	62,703	62,724
Participation rate	60.9	60.9	61.0	60.9	60.7	60.8	60.8	60.8	60.8	60.8	61.0	60.5	61.1	60.7	61.0
Employed	59,352	59,596	59,758	59,716	59,555	59,640	59,526	59,463	59,302	59,288	59,205	59,102	59,588	59,227	59,337
Employment-population ratio[2]	58.7	58.4	58.7	58.6	58.4	58.4	58.3	58.1	57.9	57.9	57.8	57.6	58.0	57.7	57.7
Agriculture	818	82	827	816	772	784	781	823	842	852	859	824	829	804	732
Nonagricultural industries	58,535	58,779	58,931	58,900	58,783	58,856	58,745	58,640	58,460	58,436	58,346	58,277	58,759	58,423	58,602
Unemployed	2,212	2,551	2,344	2,352	2,406	2,463	2,616	2,759	2,967	3,303	3,276	2,954	3,116	3,093	3,391
Unemployment rate	3.6	4.1	3.8	3.8	3.9	4.0	4.2	4.4	3.8	4.9	5.2	4.8	5.0	5.0	5.4
Both sexes, 16 to 19 years															
Civilian noninstitutional population[1]	16,042	16,146	16,068	16,046	16,086	16,145	16,161	16,163	16,195	16,252	16,275	16,310	16,293	16,292	16,292
Civilian labor force	8,369	8,077	8,091	7,909	8,078	8,048	7,715	8,041	8,071	8,023	7,845	7,800	7,790	7,962	7,748
Participation rate	52.2	50.0	50.4	49.3	50.2	49.8	47.7	49.7	49.8	49.4	48.2	47.8	47.8	48.9	47.7
Employed	7,276	6,889	6,946	6,821	6,913	6,856	6,494	6,845	6,827	6,761	6,574	6,548	6,575	6,655	6,450
Employment-population ratio[2]	45.4	42.7	43.2	42.5	43.0	42.5	40.2	42.3	42.2	41.6	40.4	40.1	40.4	40.8	39.6
Agriculture	235	225	235	209	215	236	216	220	229	220	246	241	233	239	209
Nonagricultural industries	7,041	6,664	6,711	6,612	6,698	6,620	6,278	6,625	6,598	6,541	6,328	6,307	6,342	6,416	6,240
Unemployed	1,093	1,187	1,145	1,088	1,165	1,192	1,221	1,106	1,244	1,262	1,271	1,252	1,215	1,308	1,298
Unemployment rate	13.1	14.7	13.2	13.8	14.4	14.8	15.8	14.9	15.4	15.7	16.2	16.1	15.6	16.4	16.9
White															
Civilian noninstitutional population[1]	174,428	175,888	175,533	175,653	175,789	175,924	176,069	176,220	176,372	176,500	176,607	176,713	176,783	176,866	176,866
Civilian labor force	117,574	118,144	118,014	117,714	117,854	117,986	117,813	118,274	118,506	118,566	118,403	117,759	118,472	118,159	118,661
Participation rate	67.4	67.2	67.3	67.0	67.0	67.1	66.9	67.1	67.2	67.2	67.0	66.6	67.0	66.8	67.1
Employed	113,475	113,220	113,434	113,185	113,037	113,237	112,703	113,147	112,878	112,652	112,388	111,876	112,632	111,941	111,941
Employment-population ratio[2]	65.1	64.4	64.6	64.4	64.4	64.3	64.0	64.2	64.0	63.8	63.6	63.3	63.7	63.3	63.3
Unemployed	4,099	4,923	4,640	4,541	4,728	4,810	5,073	5,127	5,628	5,914	6,015	5,883	5,840	5,873	6,236
Unemployment rate	3.5	4.2	3.9	3.9	4.0	4.1	4.3	4.3	4.7	5.0	5.1	5.0	4.9	5.0	5.3
Black															
Civilian noninstitutional population[1]	25,218	25,559	25,472	25,501	25,533	25,565	25,604	25,644	25,686	25,720	25,752	25,785	25,813	25,839	25,839
Civilian labor force	16,603	16,719	16,678	16,644	16,739	16,685	16,720	16,827	16,748	16,687	16,833	16,769	16,747	16,758	16,941
Participation rate	65.8	65.4	65.5	65.3	65.6	65.3	65.3	65.6	65.2	64.9	65.4	65.0	64.9	64.9	65.5
Employed	15,334	15,270	15,304	15,311	15,330	15,337	15,210	15,339	15,144	15,040	15,122	15,119	15,131	14,969	15,045
Employment-population ratio[2]	60.8	59.7	60.1	60.0	60.0	60.0	59.4	59.8	59.0	58.5	58.7	58.6	58.6	57.9	58.2
Unemployed	1,269	1,450	1,374	1,333	1,409	1,348	1,510	1,488	1,604	1,647	1,711	1,650	1,616	1,789	1,896
Unemployment rate	7.6	8.7	8.2	8.0	8.4	8.1	9.0	8.8	9.6	9.9	10.2	9.8	9.6	10.7	11.2

See footnotes at end of table.

4. Continued—Employment status of the population, by sex, age, race, and Hispanic origin, monthly data seasonally adjusted

[Numbers in thousands]

Employment status	Annual average		2001									2002			
	2000	2001	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Hispanic origin															
Civilian noninstitutional population[1]	22,393	23,122	22,957	23,021	23,090	23,157	23,222	23,288	23,351	23,417	23,478	23,542	23,604	23,664	23,664
Civilian labor force	15,368	15,751	15,730	15,656	15,602	15,753	15,788	15,811	15,956	15,932	16,013	15,988	16,011	15,908	16,156
Participation rate	68.6	68.1	68.5	68.0	67.6	68.0	68.0	67.9	68.3	68.0	68.2	67.9	67.8	67.2	68.1
Employed	14,492	14,714	14,738	14,684	14,574	14,776	14,771	14,785	14,824	14,751	14,753	14,700	14,867	14,877	14,963
Employment-population ratio[2]	64.7	63.6	64.2	63.8	63.1	63.8	63.6	63.5	63.5	63.0	62.8	62.4	63.0	62.3	62.3
Unemployed	876	1,037	992	972	1,028	977	1,017	1,026	1,132	1,181	1,260	1,288	1,143	1,165	1,279
Unemployment rate	5.7	6.6	6.3	6.2	6.6	6.2	6.4	6.5	7.1	7.4	7.9	8.1	7.1	7.3	7.9

[1] The population figures are not seasonally adjusted.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" groups are not presented and Hispanics are included in both the white and black population groups.

5. Selected employment indicators, monthly data seasonally adjusted

[In thousands]

Selected categories	Annual average		2001									2002			
	2000	2001	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Characteristic															
Employed, 16 years and over	135,208	135,073	135,424	135,235	135,003	145,106	134,408	135,004	134,615	134,253	134,055	133,468	134,319	133,894	133,976
Men	72,293	72,080	72,272	72,131	72,012	72,093	71,705	72,177	71,871	71,570	71,577	71,114	71,457	71,299	71,397
Women	62,915	62,992	63,152	63,104	62,991	63,013	62,703	62,827	62,744	62,683	62,478	62,354	62,862	62,595	62,579
Married men, spouse present	43,368	43,243	43,459	43,633	43,357	43,264	43,143	43,099	42,983	42,861	42,772	42,823	43,275	43,317	43,167
Married women, spouse present	33,708	33,613	33,699	33,692	33,466	33,571	33,685	33,604	33,227	33,330	33,209	33,174	33,703	33,552	33,446
Women who maintain families	8,387	8,364	2,179	8,335	2,513	1,558	8,328	8,274	8,256	8,331	8,458	8,396	8,417	8,320	8,266
Class of worker															
Agriculture:															
Wage and salary workers	2,034	1,884	1,899	1,957	1,803	1,798	1,852	1,882	1,898	1,865	1,879	1,917	1,930	1,825	1,896
Self-employed workers	1,233	1,233	1,220	1,208	1,193	'152	1,239	1,278	1,290	1,276	1,313	1,311	1,293	1,264	1,216
Unpaid family workers	38	27	44	34	32	23	29	24	26	12	27	49	21	29	34
Nonagricultural industries:															
Wage and salary workers	123,128	123,235	123,406	123,530	123,069	123,204	122,685	123,186	122,710	122,507	122,196	122,145	122,770	122,545	122,366
Government	19,053	19,127	18,928	19,068	18,934	18,999	19,150	19,290	19,223	19,172	19,183	19,047	19,286	19,218	19,811
Private industries	104,076	104,108	104,478	10,442	104,135	104,205	103,535	103,896	103,487	103,335	103,013	103,098	103,485	103,327	103,019
Private households	890	803	809	795	760	790	814	804	867	790	736	725	709	677	791
Other	103,186	103,305	103,669	103,667	103,375	103,415	102,721	103,092	102,620	102,545	102,277	102,373	102,775	102,650	102,228
Self-employed workers	8,674	8,594	8,597	8,540	8,720	8,568	8,503	8,556	8,505	8,507	8,524	8,213	8,257	8,200	8,234
Unpaid family workers	101	101	99	111	102	98	111	101	95	77	92	97	86	89	103
Persons at work part time[1]															
All industries:															
Part time for economic reasons	3,190	3,672	3,277	3,388	3,649	3,571	3,389	4,148	4,329	4,206	4,267	3,973	4,228	3,997	4,151
Slack work or business conditions	1,927	2,355	2,188	2,205	2,276	2,174	2,115	2,796	2,983	2,796	2,809	2,549	2,755	2,721	2,690
Could only find part-time work	944	1,007	895	921	1,008	1,011	952	1,064	1,108	1,121	1,161	1,089	1,120	1,021	1,131
Part time for noneconomic reasons	18,722	18,707	18,698	18,634	18,482	18,812	19,011	18,798	18,644	18,587	18,540	18,201	18,395	18,530	18,793
Nonagricultural industries:															
Part time for economic reasons	3,045	3,529	3,120	3,231	3,556	3,425	32,346	4,015	4,222	4,017	4,119	3,781	3,998	3,848	4,009
Slack work or business conditions	1,835	2,266	2,011	2,101	2,215	2,111	2,025	2,704	2,898	2,679	2,717	2,448	2,615	2,605	2,515
Could only find part-time work	924	989	883	899	990	993	927	1,045	1,082	1,096	1,138	1,068	1,089	1,001	1,122
Part time for noneconomic reasons	18,165	18,177	18,166	18,097	18,066	18,283	18,485	18,232	18,065	18,007	17,960	17,717	17,886	18,004	18,274

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial disputes.

6. Selected unemployment indicators, monthly data seasonally adjusted

[Unemployment rates]

Selected categories	Annual average		2001										2002		
	2000	2001	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Characteristic															
Total, 16 years and over...........................	4.0	4.8	4.5	4.4	4.6	4.6	4.9	5.0	5.4	5.6	5.8	5.6	5.5	5.7	6.0
Both sexes, 16 to 19 years....................	13.1	14.7	14.2	13.6	14.4	14.8	15.8	14.9	15.4	15.7	16.2	16.1	15.6	16.4	16.8
Men, 20 years and over.......................	3.3	4.2	3.9	3.9	4.1	4.0	4.4	4.3	4.8	5.2	5.2	5.2	5.0	5.2	5.4
Women, 20 years and over....................	3.6	4.1	3.8	3.8	3.9	4.0	4.2	4.4	4.8	4.9	5.2	4.8	5.0	5.0	5.4
White, total.............................	3.5	4.2	3.9	3.9	4.0	4.1	4.3	4.3	4.7	5.0	5.1	5.0	4.9	5.0	5.3
Both sexes, 16 to 19 years...............	11.4	12.7	11.9	12.0	12.7	13.2	13.8	12.7	23.1	13.5	13.7	14.2	14.0	14.5	14.0
Men, 16 to 19 years.....................	12.3	13.8	12.9	13.3	14.3	13.8	15.1	13.6	14.7	15.8	14.6	13.7	15.4	16.3	15.4
Women, 16 to 19 years...................	10.4	11.4	10.9	10.7	11.0	12.6	12.4	11.7	11.5	11.1	12.8	14.6	12.6	12.7	12.5
Men, 20 years and over...................	2.8	3.7	3.4	3.4	3.6	3.5	3.8	3.8	4.4	4.7	4.6	4.7	4.4	4.5	4.8
Women, 20 years and over..............	3.1	3.6	3.4	3.4	3.4	3.5	3.6	3.8	4.1	4.2	4.5	4.2	4.4	4.3	4.6
Black, total.............................	7.6	8.7	8.2	8.0	8.4	8.1	9.0	8.8	9.6	9.9	10.2	9.8	9.6	10.7	11.2
Both sexes, 16 to 19 years...............	24.7	29.0	30.5	25.7	28.0	26.6	30.1	28.5	30.2	32.1	33.4	30.7	27.9	31.0	35.4
Men, 16 to 19 years.....................	26.4	30.5	33.5	20.6	29.1	28.1	31.4	30.8	31.2	31.6	32.0	32.1	30.0	36.9	37.3
Women, 16 to 19 years...................	23.0	27.5	27.7	21.5	25.7	25.2	28.7	26.1	29.1	32.6	34.8	29.0	25.6	44.7	33.5
Men, 20 years and over...................	7.0	8.0	8.1	7.6	7.8	7.9	8.8	7.8	8.2	8.7	9.1	8.9	8.7	10.1	9.3
Women, 20 years and over..............	6.3	7.0	5.9	6.4	6.7	6.2	7.0	7.7	8.5	8.4	8.7	8.4	8.5	9.0	10.2
Hispanic origin, total.........................	5.7	6.6	6.3	6.2	6.6	6.2	6.4	6.5	7.1	7.4	7.9	8.1	7.1	7.3	7.9
Married men, spouse present.............	2.0	2.7	2.5	2.6	2.6	2.7	2.8	2.8	3.1	3.3	3.4	3.5	3.4	3.4	3.9
Married women, spouse present........	2.7	3.1	2.8	2.9	3.0	2.9	3.1	3.3	3.6	3.6	3.7	3.4	3.8	3.7	3.9
Women who maintain families............	5.9	6.6	6.3	6.2	6.3	6.3	6.8	7.1	6.8	8.0	8.0	8.9	8.0	7.3	8.6
Full-time workers..........................	3.9	4.7	4.3	4.3	4.5	4.5	4.8	5.0	5.4	5.6	5.8	5.7	5.7	5.8	6.2
Part-time workers..........................	4.8	5.1	5.3	4.8	5.2	5.1	5.4	4.6	5.5	5.6	5.6	5.2	4.8	5.2	5.2
Industry															
Nonagricultural wage and salary workers....................	4.1	5.1	4.5	4.6	4.6	4.8	4.8	5.2	5.2	5.8	6.0	6.2	6.0	6.1	6.5
Mining.....................................	3.9	4.7	4.0	4.8	4.9	5.9	3.9	4.7	5.0	5.8	5.3	6.1	4.5	6.3	6.0
Construction..............................	6.4	7.3	6.4	6.9	6.7	6.9	7.1	7.6	7.8	8.3	8.9	8.9	7.9	8.8	9.3
Manufacturing.............................	3.6	5.2	4.8	4.6	4.8	5.0	5.2	5.7	5.6	6.0	6.4	6.8	6.7	7.0	7.2
Durable goods..........................	3.4	5.3	4.7	4.4	4.8	5.0	5.0	5.8	5.8	6.5	6.9	7.2	7.5	7.5	7.6
Nondurable goods......................	4.0	5.1	4.9	4.9	4.8	4.9	5.5	5.4	5.4	5.3	5.5	6.1	5.5	6.3	6.6
Transportation and public utilities.........	3.1	4.1	3.2	4.0	3.6	4.1	3.4	3.6	3.9	6.0	6.1	6.1	5.8	5.4	6.1
Wholesale and retail trade..................	5.0	5.6	5.3	5.2	5.2	5.4	5.3	5.6	5.9	6.1	6.4	7.1	6.5	6.5	7.2
Finance, insurance, and real estate......	2.3	2.8	2.5	2.6	2.4	2.6	3.1	2.7	2.8	2.8	3.6	3.0	2.8	3.1	3.2
Services..................................	3.8	4.6	4.1	4.1	4.2	4.4	4.4	4.9	4.8	5.5	5.4	5.5	5.5	5.4	5.8
Government workers..........................	2.1	2.2	2.1	2.2	2.0	2.1	2.1	2.1	2.2	2.3	2.4	2.4	2.7	2.8	2.5
Agricultural wage and salary workers........	7.5	9.7	11.1	9.4	8.4	9.5	10.5	10.0	7.6	9.0	9.3	9.6	9.5	12.4	9.0
Educational attainment[1]															
Less than a high school diploma...............	6.4	7.3	6.8	6.7	6.7	6.9	6.8	7.3	7.7	7.8	8.1	8.8	8.3	8.0	9.0
High school graduates, no college.............	3.5	4.2	3.8	3.8	3.9	3.9	4.1	4.3	4.3	4.6	5.0	4.9	5.3	5.4	5.7
Some college, less than a bachelor's degree................................	2.7	3.3	2.7	2.9	3.0	3.1	3.1	3.3	3.5	3.9	4.2	4.3	4.1	4.3	4.7
College graduates................................	1.7	2.3	1.9	2.2	2.1	2.1	22.2	2.2	2.5	2.7	2.9	3.1	2.9	2.7	3.0

[1] Data refer to persons 25 years and over.

7. Duration of unemployment, monthly data seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		2001									2002			
	2000	2001	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Less than 5 weeks	2,543	2,833	2,822	2,714	2,809	2,647	2,955	2,807	3,084	3,090	3,024	2,978	2,828	3,078	2,793
5 to 14 weeks	1,803	2,163	1,976	2,021	2,098	2,170	2,152	2,366	2,522	2,573	2,724	2,586	2,515	2,411	2,818
15 weeks and over	1,309	1,746	1,507	1,503	1,571	1,630	1,798	1,907	2,042	2,317	2,410	2,546	2,561	2,688	2,854
15 to 26 weeks	665	949	781	862	843	948	980	1,084	1,136	1,207	1,295	1,418	1,383	1,355	1,360
27 weeks and over	644	787	726	641	728	682	818	823	906	1,110	1,115	1,127	1,178	1,333	1,494
Mean duration, in weeks	12.6	13.2	12.6	12.4	12.9	12.7	13.2	13.3	13.0	14.4	14.5	14.6	15.0	15.4	16.6
Median duration, in weeks	5.9	6.8	6.0	6.4	6.3	6.7	6.6	7.3	7.4	7.6	8.2	8.8	8.1	8.1	8.9

8. Unemployed persons by reason for unemployment, monthly data seasonally adjusted

[Numbers in thousands]

Reason for unemployment	Annual average		2001									2002			
	2000	2001	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Job losers[1]	2,492	3,428	3,020	3,132	3,249	3,294	3,438	3,595	4,297	4,501	4,492	4,354	4,326	4,370	4,525
On temporary layoff	842	1,044	1,023	1,055	990	1,020	1,071	1,114	1,288	1,157	1,107	1,124	1,106	1,066	1,095
Not on temporary layoff	1,650	2,379	1,997	2,077	2,259	2,274	2,367	2,481	3,009	3,344	3,385	3,231	3,220	3,204	3,430
Job leavers	775	832	776	818	807	791	877	819	880	848	908	879	877	862	1,017
Reentrants	1,957	2,029	1,991	1,827	1,921	1,948	2,162	2,102	2,113	2,197	2,361	2,191	2,268	2,471	2,450
New entrants	431	453	456	467	470	442	488	466	466	497	495	479	485	557	519
Percent of unemployed															
Job losers[1]	44.1	50.8	48.4	50.2	50.4	50.9	49.4	51.5	55.4	56.0	54.4	55.1	54.4	52.3	53.2
On temporary layoff	14.9	15.6	16.4	16.9	15.4	15.8	15.4	16.0	16.6	14.4	13.4	14.2	13.9	13.1	12.9
Not on temporary layoff	29.2	35.3	32.0	33.3	35.0	35.1	34.0	35.5	38.8	41.6	41.0	40.9	40.5	39.3	40.3
Job leavers	13.7	12.3	12.4	13.1	12.5	12.2	12.6	11.7	11.3	10.5	11.0	11.1	11.0	10.6	12.0
Reentrants	34.6	30.1	31.9	29.3	29.8	30.1	31.0	30.1	27.2	27.3	28.6	27.7	28.5	30.3	28.8
New entrants	7.6	6.7	7.3	7.5	7.3	6.8	7.0	6.7	6.0	6.2	6.0	6.1	6.1	6.8	6.1
Percent of civilian labor force															
Job losers[1]	1.8	2.4	2.1	2.2	2.3	2.3	2.4	2.5	3.0	3.2	3.2	3.1	3.0	3.0	3.2
Job leavers	.6	.6	.5	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.7
Reentrants	1.4	1.4	1.4	1.3	1.4	1.4	1.5	1.5	1.5	1.5	1.7	1.5	1.6	1.7	1.7
New entrants	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4

[1] Includes persons who completed temporary jobs.

9. Unemployment rates by sex and age, monthly data seasonally adjusted

[Civilian workers]

Sex and age	Annual average		2001									2002			
	2000	2001	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Total, 16 years and over................	4.0	4.8	4.5	4.4	4.6	4.6	4.9	5.0	5.4	5.6	5.8	5.6	5.5	5.7	6.0
16 to 24 years..........................	9.3	10.6	10.3	10.0	10.4	10.2	11.3	10.8	11.5	11.7	11.9	11.9	11.6	12.5	12.3
16 to 19 years......................	13.1	14.7	14.2	13.8	14.4	14.8	15.8	14.9	15.4	15.7	16.2	16.1	15.6	16.4	16.8
16 to 17 years..................	15.4	17.1	16.7	15.8	16.5	19.0	18.6	16.6	17.4	17.5	18.8	17.0	16.5	16.5	19.4
18 to 19 years..................	11.5	13.2	12.6	12.5	13.0	12.4	14.4	13.9	14.2	14.8	14.8	15.2	14.7	15.1	15.1
20 to 24 years......................	7.1	8.3	8.2	7.9	8.2	7.7	8.9	8.6	9.3	9.5	9.6	9.7	9.5	10.3	10.0
25 years and over....................	3.0	3.7	3.4	3.4	3.5	3.5	3.8	3.8	4.2	4.4	4.5	4.4	4.5	4.5	4.9
25 to 54 years......................	3.1	3.8	3.4	3.5	3.6	3.7	3.9	3.9	4.4	4.6	4.7	4.7	4.6	4.7	5.0
55 years and over.................	2.6	3.0	2.7	2.6	2.8	2.9	3.1	3.2	3.4	3.5	4.0	3.5	3.8	3.5	4.0
Men, 16 years and over..............	3.9	4.8	4.6	4.5	4.7	4.7	5.1	5.0	5.5	5.9	5.8	5.8	5.6	5.9	6.1
16 to 24 years..........................	9.7	11.4	10.9	11.0	11.6	10.7	12.3	1.5	12.4	13.0	12.8	12.5	12.4	13.7	13.0
16 to 19 years......................	14.0	15.9	15.1	15.4	15.8	15.6	17.4	16.0	17.2	17.7	17.2	16.3	16.8	18.5	18.1
16 to 17 years..................	16.8	18.8	18.7	17.9	18.5	19.1	21.9	18.7	20.3	20.4	20.0	17.6	19.6	20.8	19.6
18 to 19 years..................	12.2	14.1	12.9	13.9	14.2	13.4	15.0	14.5	15.1	16.2	15.6	15.1	15.4	16.7	17.2
20 to 24 years......................	7.3	8.9	8.6	8.7	9.3	8.1	9.5	9.1	9.8	10.5	10.5	10.6	10.2	11.1	10.3
25 years and over....................	2.8	3.6	3.4	3.3	3.4	3.6	3.8	3.7	4.2	4.5	4.5	4.5	4.4	4.5	4.8
25 to 54 years......................	2.9	3.7	3.5	3.4	3.5	3.6	3.9	3.8	4.3	4.6	4.5	4.7	4.5	4.7	4.9
55 years and over................	2.7	3.3	2.9	2.9	3.0	3.1	3.3	3.3	3.7	4.1	4.2	3.8	4.1	3.6	4.3
Women, 16 years and over...........	4.1	4.7	4.3	4.3	4.4	4.6	4.8	5.0	5.3	5.4	5.8	5.4	5.5	5.5	6.0
16 to 24 years..........................	8.9	9.7	9.7	8.8	9.2	9.7	10.3	10.1	10.5	10.3	11.0	11.3	10.7	11.2	11.6
16 to 19 years......................	12.1	13.4	13.2	12.1	13.0	14.0	14.1	13.6	13.6	13.7	15.1	15.8	14.3	14.3	15.4
16 to 17 years..................	14.0	15.3	14.5	13.8	14.4	18.8	15.4	14.3	14.5	14.5	17.6	16.4	13.6	15.3	19.2
18 to 19 years..................	10.8	12.2	12.2	11.0	11.8	11.3	13.7	13.3	13.3	13.3	14.0	15.2	13.9	13.4	12.9
20 to 24 years......................	7.0	7.5	7.8	7.0	7.0	7.3	8.2	8.1	8.7	8.3	8.7	8.7	8.7	9.4	9.6
25 years and over....................	3.2	3.7	3.3	3.4	3.5	3.5	3.8	4.0	4.2	4.4	4.6	4.3	4.6	4.4	5.0
25 to 54 years......................	3.3	3.8	3.4	3.6	3.7	3.7	3.9	4.0	4.4	4.7	4.8	4.6	4.7	4.6	5.1
55 years and over................	2.6	2.7	2.5	2.4	2.6	2.6	2.8	3.2	3.2	2.8	3.7	3.0	3.5	3.4	3.7

10. Unemployment rates by State, seasonally adjusted

State	Mar. 2001	Feb. 2002[p]	Mar. 2002[p]	State	Mar. 2001	Feb. 2002[p]	Mar. 2002[p]
Alabama	5.0	5.5	6.0	Missouri	4.5	4.8	5.2
Alaska	6.3	5.7	6.3	Montana	4.6	4.4	4.6
Arizona	4.1	6.0	5.9	Nebraska	3.0	3.4	3.6
Arkansas	4.9	4.9	5.2	Nevada	4.7	6.1	5.8
California	4.8	6.2	6.5	New Hampshire	3.1	4.0	4.1
Colorado	3.0	5.7	5.6	New Jersey	3.8	5.2	5.6
Connecticut	2.8	3.5	3.5	New Mexico	4.6	6.2	6.1
Delaware	3.7	3.5	3.8	New York	4.3	5.9	5.9
District of Columbia	6.4	7.0	6.7	North Carolina	4.9	6.3	6.6
Florida	4.1	5.5	5.4	North Dakota	2.7	2.9	3.1
Georgia	3.7	4.5	4.6	Ohio	3.9	5.4	5.8
Hawaii	4.2	4.7	4.6	Oklahoma	3.4	4.2	4.2
Idaho	4.7	5.5	5.5	Oregon	5.2	8.1	8.1
Illinois	5.2	5.8	6.1	Pennsylvania	4.5	5.5	5.6
Indiana	3.9	5.1	4.9	Rhode Island	4.7	4.2	4.2
Iowa	3.1	3.4	3.4	South Carolina	5.1	5.6	6.0
Kansas	4.2	4.4	4.4	South Dakota	3.0	3.2	3.2
Kentucky	5.0	5.2	5.3	Tennessee	4.2	5.4	5.7
Louisiana	5.8	5.9	5.9	Texas	4.3	5.8	5.8
Maine	3.5	3.9	3.9	Utah	4.0	5.5	6.0
Maryland	3.8	4.6	4.6	Vermont	3.3	3.5	3.9
Massachusetts	2.9	4.4	4.4	Virginia	2.8	4.1	4.2
Michigan	4.8	5.7	6.0	Washington	5.9	7.0	6.8
Minnesota	3.6	4.2	4.4	West Virginia	5.0	5.6	5.9
Mississippi	5.3	6.4	6.6	Wisconsin	4.4	5.8	5.7
				Wyoming	3.7	3.6	3.9

[p] = preliminary

Dash indicates data not available.

11. Employment of workers on nonfarm payrolls by State, seasonally adjusted
[In thousands]

State	Mar. 2001	Feb. 2002[p]	Mar. 2002	State	Mar. 2001	Feb. 2002[p]	Mar. 2002
Alabama	1,922.3	1,900.4	1,899.9	Missouri	2,749.8	2,699.2	2,691.1
Alaska	287.6	292.8	291.7	Montana	392.4	394.5	393.2
Arizona	2,277.2	2,242.5	2,243.4	Nebraska	909.2	909.2	911.8
Arkansas	1,160.4	1,154.2	1,155.7	Nevada	1,056.5	1,060.5	1,066.3
California	14,718.8	14,664.6	14,672.0	New Hampshire	630.0	626.9	626.5
Colorado	2,244.2	2,194.9	2,190.1	New Jersey	4,027.7	4,016.7	4,014.6
Connecticut	1,687.8	1,675.8	1,673.3	New Mexico	757.4	762.6	763.0
Delaware	423.4	416.0	417.7	New York	8,678.5	8,547.9	8,541.3
District of Columbia	650.8	649.4	649.2	North Carolina	3,932.5	3,880.6	3,882.3
Florida	7,195.0	7,174.2	7,178.8	North Dakota	330.0	330.7	330.5
Georgia	3,986.5	3,880.7	3,876.8	Ohio	5,595.1	5,543.5	5,534.9
Hawaii	557.6	547.3	549.0	Oklahoma	1,508.3	1,510.4	1,518.6
Idaho	570.3	569.3	568.3	Oregon	1,611.2	1,577.6	1,575.7
Illinois	6,039.4	5,939.3	5,922.3	Pennsylvania	5,718.2	5,658.3	5,650.8
Indiana	2,955.3	2,907.6	2,910.5	Rhode Island	480.2	479.7	480.3
Iowa	1,472.4	1,464.4	1,461.3	South Carolina	1,836.2	1,830.0	1,827.1
Kansas	1,355.2	1,358.7	1,362.1	South Dakota	379.9	376.1	375.4
Kentucky	1,818.9	1,828.0	1,823.0	Tennessee	2,723.5	2,719.1	2,717.2
Louisiana	1,924.7	1,929.0	1,932.6	Texas	9,555.4	9,455.5	9,455.7
Maine	609.2	609.0	609.0	Utah	1,085.9	1,079.9	1,072.4
Maryland	2,468.8	2,456.3	2,456.5	Vermont	300.4	296.5	296.1
Massachusetts	3,355.7	3,305.7	3,305.6	Virginia	3,551.1	3,493.8	3,497.4
Michigan	4,616.1	4,557.2	4,562.6	Washington	2,716.6	2,659.4	2,651.6
Minnesota	2,696.9	2,659.3	2,659.9	West Virginia	739.7	736.8	736.8
Mississippi	1,137.2	1,131.2	1,133.1	Wisconsin	2,841.4	2,813.8	2,813.8
				Wyoming	244.2	248.0	248.9

[p] = preliminary. Dash indicates data not available.

NOTE: Some data in this table may differ from data published elsewhere because of the continual updating of the data base.

12. Employment of workers on nonfarm payrolls by industry, monthly data seasonally adjusted

[In thousands]

Industry	Annual average		2001									2002			
	2000	2001	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.ᴾ	Apr.ᴾ
TOTAL............................	131,739	132,212	132,489	132,530	132,431	132,449	132,395	132,230	131,782	131,427	131,321	131,212	130,706	130,701	130,680
PRIVATE SECTOR..................	111,079	111,339	111,742	111,760	111,603	111,517	111,390	111,249	110,784	110,421	110,260	110,142	109,544	109,505	109,502
GOODS-PRODUCING.................	25,709	25,121	25,421	25,324	25,186	25,122	24,963	24,888	24,746	24,577	24,453	24,273	24,041	23,975	23,905
Mining '.............................	543	563	560	564	565	567	569	569	569	567	564	563	564	560	564
Metal mining........................	41	36	37	37	35	34	35	35	35	34	33	31	32	32	32
Oil and gas extraction..............	311	337	335	339	340	341	342	342	340	339	336	339	339	336	339
Nonmetallic minerals, except fuels..........................	114	113	113	112	112	113	112	112	113	113	113	111	111	111	112
Construction.........................	6,698	5,861	6,852	6,881	6,864	6,867	6,861	6,871	6,852	6,851	6,850	6,787	6,597	6,593	6,541
General building contractors......	1,528	1,554	1,548	1,556	1,551	1,554	1,557	1,562	1,560	1,561	1,559	1,552	1,459	1,462	1,452
Heavy construction, except building.............................	901	629	915	923	925	935	932	932	933	942	944	928	914	908	901
Special trades contractors........	4,269	4,378	4,389	4,402	4,388	4,378	4,372	4,377	4,359	4,348	4,348	4,307	4,225	4,223	4,188
Manufacturing.......................	18,469	17,698	18,009	17,879	17,757	17,688	17,533	17,448	17,325	17,159	17,039	16,923	16,880	16,822	16,800
Production workers..............	12,628	11,922	12,166	12,066	11,956	11,900	11,782	11,706	11,626	11,500	11,405	11,328	11,305	11,264	11,250
Durable goods......................	11,138	10,638	10,870	10,778	10,692	10,624	10,523	10,460	10,363	10,240	10,158	10,048	10,023	9,976	9,976
Production workers..............	7,591	7,122	7,308	7,235	7,157	7,102	7,022	6,970	6,897	6,805	6,744	6,675	6,653	6,625	6,620
Lumber and wood products.....	832	795	800	797	798	797	793	794	789	784	780	781	771	769	767
Furniture and fixtures.............	558	527	543	540	532	531	519	513	505	499	499	497	491	491	497
Stone, clay, and glass products.........................	579	571	577	574	572	569	568	567	566	562	559	554	551	550	551
Primary metal industries.........	698	651	667	660	654	648	643	638	633	619	613	600	601	596	598
Fabricated metal products......	1,537	1,479	1,503	1,488	1,478	1,478	1,468	1,464	1,454	1,435	1,428	1,416	1,425	1,422	1,425
Industrial machinery and equipment.........................	2,120	2,014	2,072	2,054	2,031	2,007	1,980	1,965	1,943	1,917	1,892	1,870	1,855	1,846	1,842
Computer and office equipment.........................	361	355	367	366	357	353	348	344	342	339	335	327	315	315	313
Electronic and other electrical equipment.........................	1,719	1,612	1,684	1,656	1,624	1,589	1,565	1,551	1,529	1,499	1,474	1,456	1,459	1,445	1,443
Electronic components and accessories.....................	682	647	686	670	650	634	618	613	601	591	583	571	571	566	566
Transportation equipment........	1,849	1,747	1,768	1,757	1,749	1,752	1,750	1,735	1,714	1,706	1,696	1,661	1,680	1,674	1,671
Motor vehicles and equipment.........................	1,013	933	950	939	931	936	931	919	903	903	901	878	913	915	912
Aircraft and parts.................	465	463	464	465	465	466	465	465	463	456	452	440	427	419	416
Instruments and related products...........................	852	859	866	865	865	865	858	851	849	843	839	835	816	813	811
Miscellaneous manufacturing industries........................	394	385	390	387	389	388	379	382	381	376	378	378	372	370	371
Nondurable goods.................	7,331	7,059	7,139	7,101	7,065	7,064	7,010	6,988	6,962	6,919	6,881	6,875	6,857	6,846	6,824
Production workers..............	5,038	4,800	4,858	4,831	4,799	4,798	4,760	4,736	4,729	4,695	4,661	4,653	4,652	4,636	4,630
Food and kindred products......	1,684	1,685	1,687	1,684	1,685	1,680	1,674	1,682	1,689	1,691	1,682	1,684	1,686	1,685	1,689
Tobacco products.................	34	33	32	33	33	33	35	33	33	33	32	33	33	34	33
Textile mill products..............	528	473	489	480	472	471	465	459	454	446	442	440	441	440	436
Apparel and other textile products...........................	633	565	581	579	567	571	554	551	542	533	531	534	531	527	523
Paper and allied products........	657	635	641	639	635	632	628	629	628	627	624	624	621	620	615
Printing and publishing............	1,547	1,492	1,512	1,502	1,495	1,489	1,483	1,473	1,465	1,452	1,444	1,434	1,428	1,419	1,413
Chemicals and allied products.	1,038	1,033	1,036	1,033	1,033	1,039	1,035	1,031	1,027	1,024	1,021	1,020	1,011	1,010	1,008
Petroleum and coal products...	127	127	128	127	128	128	127	128	128	127	127	128	126	126	125
Rubber and miscellaneous plastics products..................	1,011	954 64	967	959	953	957	947	941	935	927	920	919	924	929	927
Leather and leather products...	71	64	66	65	64	64	62	61	60	59	58	59	56	56	55
SERVICE-PRODUCING...............	106,050	107,091	107,068	107,206	107,245	107,327	107,432	107,342	107,036	106,850	106,868	106,939	106,665	106,726	106,775
Transportation and public utilities..............................	7,019	7,070	7,119	7,130	7,118	7,108	7,082	7,070	7,016	6,952	6,915	6,898	6,837	6,814	6,799
Transportation...........................	4,529	4,531	4,576	4,584	4,571	4,561	4,539	4,528	4,472	4,414	4,387	4,381	4,341	4,330	4,330
Railroad transportation............	236	227	230	230	227	226	226	226	225	224	227	228	234	233	230
Local and interurban passenger transit..................	476	481	477	483	483	485	486	482	479	480	485	482	479	478	476
Trucking and warehousing.......	1,856	1,854	1,864	1,867	1,867	1,863	1,844	1,838	1,832	1,830	1,832	1,830	1,826	1,819	1,830
Water transportation...............	196	203	202	203	201	203	203	205	206	204	206	204	187	186	190
Transportation by air..............	1,281	1,288	1,313	1,315	1,310	1,304	1,303	1,300	1,264	1,221	1,189	1,192	1,171	1,172	1,162
Pipelines, except natural gas...	14	14	14	14	14	14	14	14	14	14	14	14	15	15	15
Transportation services...........	471	464	476	472	469	466	463	463	452	441	434	431	429	427	247
Communications and public utilities..............................	2,490	2,540	2,543	2,546	2,547	2,547	2,543	2,542	2,544	2,538	2,528	2,517	2,496	2,484	2,469
Communications.....................	1,639	1,692	1,696	1,699	1,700	1,700	1,695	1,695	1,695	1,689	1,683	1,670	1,652	1,643	1,628
Electric, gas, and sanitary services...........................	851	847	847	847	847	847	848	847	849	849	845	847	844	841	841
Wholesale trade........................	7,024	7,014	7,053	7,038	7,022	7,017	7,010	6,988	6,971	6,941	6,938	6,933	6,689	6,681	6,678
Retail trade..............................	23,307	23,488	23,530	23,546	23,561	23,606	23,583	23,536	23,422	23,424	23,365	23,408	23,331	23,332	23,345
Building materials and garden supplies.............................	1,016	1,010	999	1,006	1,014	1,008	1,014	1,013	1,012	1,010	1,013	1,022	1,048	1,053	1,061
General merchandise stores......	2,837	2,792	2,804	2,821	2,818	2,810	2,800	2,793	2,784	2,778	2,755	2,710	2,892	2,901	2,915
Department stores..................	2,491	2,447	2,459	2,473	2,471	2,458	2,449	2,450	2,422	2,420	2,410	2,369	2,550	2,560	2,575

See footnotes at end of table.

12. Continued—Employment of workers on nonfarm payrolls by industry, monthly data seasonally adjusted

[In thousands]

Industry	Annual average		2001									2002			
	2000	2001	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[P]	Apr.[P]
Food stores.........................	3,521	3,542	3,562	3,553	3,544	3,536	3,531	3,538	3,542	3,539	3,525	3,519	3,402	3,392	3,392
Automotive dealers and service stations.....................	2,412	2,429	2,421	2,428	2,431	2,435	2,441	2,435	2,429	2,430	2,428	2,436	2,430	2,426	2,429
New and used car dealers.......	1,114	1,130	1,122	1,126	1,128	1,131	1,133	1,133	1,134	1,137	1,141	1,145	1,134	1,131	1,129
Apparel and accessory stores...	1,193	1,219	1,226	1,231	1,227	1,219	1,224	1,224	1,208	1,203	1,192	1,221	1,172	1,175	1,170
Furniture and home furnishings stores...............................	1,134	1,140	1,140	1,136	1,136	1,137	1,137	1,138	1,136	1,136	1,143	1,138	1,143	1,143	1,141
Eating and drinking places........	8,114	8,215	8,213	8,216	8,241	8,310	8,280	8,242	8,187	8,198	8,209	8,213	8,154	8,154	8,152
Miscellaneous retail establishments...................	3,080	3,142	3,165	3,155	3,150	3,151	3,156	3,153	3,144	3,130	3,100	3,149	3,083	3,088	3,085
Finance, insurance, and real estate......................	7,560	7,623	7,626	7,644	7,631	7,618	7,623	7,633	7,634	7,638	7,632	7,638	7,745	7,740	7,743
Finance...............................	3,710	3,759	3,761	3,770	3,767	3,755	3,758	3,758	3,761	3,772	3,774	3,778	3,812	3,809	3,813
Depository institutions..............	2,029	2,036	2,032	2,037	2,041	2,039	2,037	2,039	2,041	2,045	2,044	2,046	2,072	2,074	2,075
Commercial banks..................	1,430	1,423	1,421	1,426	1,428	1,426	1,423	1,423	1,427	1,428	1,427	1,429	1,446	1,447	1,446
Savings institutions..............	253	256	255	255	256	255	255	256	257	259	260	262	263	264	264
Nondepository institutions........	681	701	691	697	699	703	709	706	712	717	728	742	754	753	756
Security and commodity brokers..........................	748	763	780	776	766	755	755	755	750	751	744	742	726	722	723
Holding and other investment offices.........................	251	259	258	260	261	258	257	258	258	259	258	259	260	260	259
Insurance.............................	2,346	2,355	2,356	2,358	2,356	2,357	2,357	2,362	2,361	2,356	2,352	2,351	2,376	2,375	2,374
Insurance carriers.................	1,589	1,596	1,596	1,598	1,598	1,599	1,598	1,601	1,602	1,597	1,594	1,594	1,593	1,591	1,591
Insurance agents, brokers, and service......................	757	759	760	760	758	758	759	761	759	759	758	757	783	784	785
Real estate[1].......................	1,504	1,510	1,509	1,516	1,508	1,506	1,508	1,513	1,512	1,510	1,506	1,509	1,557	1,556	1,556
Services[1]....................	40,460	41,023	40,993	41,078	41,085	41,046	41,129	41,134	40,995	40,889	40,957	40,992	40,901	40,963	41,025
Agricultural services...............	832	801	824	834	833	834	837	838	841	840	846	843	868	872	857
Hotels and other lodging places	1,914	1,912	1,944	1,935	1,920	1,922	1,912	1,913	1,862	1,852	1,845	1,854	1,811	1,811	1,796
Personal services..................	1,251	1,275	1,267	1,277	1,279	1,281	1,284	1,284	1,281	1,271	1,294	1,295	1,282	1,289	1,286
Business services..................	9,858	9,627	9,729	9,702	9,666	9,592	9,588	9,581	9,467	9,356	9,346	9,317	9,207	9,237	9,312
Services to buildings..............	994	1,001	1,009	1,013	1,008	998	997	997	995	996	992	982	1,018	1,021	1,027
Personnel supply services.......	3,887	3,531	3,600	3,590	3,556	3,517	3,521	3,488	3,378	3,282	3,252	3,237	3,070	3,107	3,175
Help supply services..........	3,487	3,142	3,202	3,198	3,161	3,127	3,113	3,106	3,005	2,913	2,894	2,881	2,758	2,795	2,857
Computer and data processing services..............	2,095	2,193	2,199	2,200	2,205	2,202	2,194	2,200	2,201	2,189	2,189	2,186	2,208	2,198	2,190
Auto repair services and parking.....................	1,248	1,302	1,300	1,309	1,303	1,312	1,307	1,306	1,298	1,305	1,304	1,308	1,262	1,260	1,261
Miscellaneous repair services...	366	362	364	363	361	360	362	363	362	360	359	358	379	377	377
Motion pictures......................	594	592	601	587	602	595	589	586	582	584	580	589	574	572	574
Amusement and recreation services.......................	1,728	1,771	1,764	1,787	1,768	1,772	1,777	1,766	1,781	1,762	1,777	1,772	1,649	1,635	1,611
Health services......................	10,197	10,497	10,280	10,296	10,329	10,354	10,384	10,408	10,431	10,458	10,483	10,504	10,575	10,602	10,626
Offices and clinics of medical doctors.........................	1,924	1,979	1,967	1,973	1,981	1,983	1,990	1,992	1,993	2,000	2,002	2,007	2,041	2,046	2,044
Nursing and personal care facilities........................	1,795	1,822	1,816	1,814	1,821	1,823	1,825	1,830	1,834	1,837	1,842	1,848	1,875	1,879	1,883
Hospitals.............................	3,990	4,095	4,062	4,071	4,086	4,098	4,114	4,124	4,135	4,149	4,158	4,167	4,184	4,193	4,199
Home health care services......	643	650	646	645	648	647	653	655	655	657	659	663	642	643	634
Legal services.......................	1,010	1,026	1,021	1,027	1,027	1,026	1,028	1,030	1,030	1,030	1,031	1,030	1,054	1,056	1,059
Educational services...............	2,325	2,420	2,388	2,431	2,426	2,432	2,452	2,446	2,436	2,439	2,457	2,472	2,485	2,489	2,501
Social services......................	2,903	305'	3,023	3,039	3,056	3,048	3,076	3,085	3,096	3,100	33,105	3,122	3,155	3,162	3,167
Child day care services............	712	749	743	745	756	760	765	756	757	755	757	756	722	723	725
Residential care......................	806	843	835	842	845	847	848	851	854	855	853	860	899	902	904
Museums and botanical and zoological gardens................	106	110	109	110	111	111	111	112	112	110	110	110	109	109	109
Membership organizations........	2,475	2,498	2,489	2,496	2,501	2,493	2,503	2,509	2,505	2,505	2,506	2,504	2,471	2,470	2,477
Engineering and management services.......................	3,419	3,525	3,517	3,512	3,529	3,540	3,544	3,533	3,538	3,543	3,541	3,542	3,629	3,631	3,636
Engineering and architectural services.......................	1,017	1,060	1,053	1,057	1,059	1,064	1,067	1,067	1,069	1,065	1,063	1,064	1,044	1,044	1,041
Management and public relations........................	1,090	1,123	1,124	1,121	1,124	1,119	1,123	1,122	1,124	1,127	1,125	1,132	1,193	1,191	1,202
Government....................	20,681	20,873	20,747	20,770	20,828	20,932	21,005	20,981	20,998	21,006	21,061	21,070	21,162	21,196	21,185
Federal.................................	2,777	2,616	2,615	2,612	2,621	2,626	2,622	2,627	2,625	2,607	2,615	2,607	2,608	2,611	2,610
Federal, except Postal Service...........................	1,917	1,767	1,756	1,754	1,772	1,772	1,774	1,776	1,779	1,777	1,775	1,775	1,777	1,782	1,784
State....................................	4,785	4,880	4,847	4,854	4,881	4,909	4,913	4,931	4,919	4,916	4,928	4,934	4,937	4,940	4,942
Education..............................	2,032	2,088	2,065	2,066	2,089	2,117	2,122	2,129	2,107	2,109	2,112	2,120	2,130	2,133	2,135
Other State government..........	2,753	2,792	2,782	2,788	2,792	2,792	2,791	2,802	2,812	2,807	2,816	2,814	2,807	2,807	2,807
Local....................................	13,119	13,377	13,285	13,304	13,326	13,397	13,470	13,423	13,454	13,843	13,518	13,529	13,617	13,645	13,633
Education..............................	7,440	7,567	7,495	7,512	7,515	7,575	7,650	7,595	7,607	7,630	7,642	7,644	7,746	7,767	7,754
Other local government............	5,679	5,810	5,790	5,792	5,811	5,822	5,820	5,828	5,847	5,853	5,876	5,885	5,871	5,878	5,879

[1] Includes other industries not shown separately.

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

13. Average weekly hours of production or nonsupervisory workers on private nonfarm payrolls, by industry, monthly data seasonally adjusted

Industry	Annual average		2001									2002			
	2000	2001	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[p]	Apr.[p]
PRIVATE SECTOR.............................	34.5	34.2	34.2	34.2	34.2	34.2	34.0	34.1	34.0	34.1	34.1	33.6	34.2	34.2	34.2
GOODS-PRODUCING...........................	41.0	40.3	40.6	40.5	40.4	40.5	40.3	40.2	40.0	40.0	40.1	39.9	40.4	40.5	40.4
MINING..	43.1	43.4	44.0	43.9	43.3	43.3	43.4	43.5	43.1	43.2	43.1	42.3	43.4	43.3	42.4
MANUFACTURING.............................	41.6	40.7	41.0	40.7	40.7	40.8	40.7	40.6	40.5	40.3	40.6	40.4	40.7	41.0	40.9
Overtime hours................................	4.6	3.9	3.9	3.9	3.9	4.0	4.1	3.9	3.8	3.7	3.8	3.7	3.7	4.1	4.2
Durable goods...............................	42.1	41.0	41.3	41.0	40.9	41.2	41.1	40.9	40.7	40.4	40.9	40.8	41.1	41.3	41.4
Overtime hours...............................	4.7	3.9	3.9	3.9	3.9	4.0	4.1	3.8	3.7	3.6	3.8	3.7	3.9	4.1	4.1
Lumber and wood products................	41.0	40.3	40.1	40.6	40.4	41.1	40.9	41.1	40.6	40.5	40.7	39.7	40.9	41.1	40.8
Furniture and fixtures........................	40.0	36.9	39.3	38.6	38.4	39.7	39.7	38.8	38.3	38.4	38.9	39.8	40.3	40.6	40.8
Stone, clay, and glass products..........	43.1	43.6	43.2	43.9	44.0	44.0	43.9	44.0	43.9	43.8	43.6	43.2	4.1	43.6	43.8
Primary metal industries....................	44.9	43.6	44.3	43.5	43.9	44.1	43.7	43.7	43.2	42.6	43.9	43.6	43.8	44.4	44.3
Blast furnaces and basic steel products..	46.0	44.5	45.4	44.6	45.1	44.7	44.6	45.5	44/0	43.3	43.8	43.9	44.8	45.5	45.1
Fabricated metal products................	42.6	41.3	42.0	41.4	41.2	41.6	41.5	41.2	41.0	40.7	41.3	41.2	41.6	41.7	41.6
Industrial machinery and equipment...	42.2	40.7	41.3	40.7	40.4	40.8	40.2	40.3	40.4	39.9	40.1	40.4	40.1	40.5	40.6
Electronic and other electrical equipment.....................................	41.1	39.4	39.8	39.1	39.3	38.9	39.1	39.1	39.0	38.8	39.3	38.5	38.9	39.4	39.5
Transportation equipment...................	43.4	41.9	42.4	42.4	41.9	42.2	42.8	41.5	41.3	41.3	41.8	42.3	42.3	42.4	42.6
Motor vehicles and equipment..........	44.4	42.7	43.3	43.6	43.0	43.0	44.6	42.3	41.9	42.2	43.1	43.5	43.7	43.9	44.4
Instruments and related products.......	41.3	40.6	41.0	41.0	40.8	40.8	40.4	41.1	40.7	40.3	40.5	40.4	40.4	40.6	40.4
Miscellaneous manufacturing.............	39.0	37.9	38.2	37.9	38.4	38.4	38.2	37.6	37.5	37.1	37.8	37.1	38.4	38.8	38.8
Nondurable goods...........................	40.8	40.3	40.5	40.3	40.4	40.3	40.1	40.2	40.2	40.0	40.2	40.0	40.2	40.4	40.3
Overtime hours...............................	4.4	4.0	4.0	4.0	3.9	4.0	4.1	4.1	4.1	3.9	4.0	3.8	3.9	4.2	4.3
Food and kindred products................	41.7	41.1	41.3	41.1	41.2	40.9	41.1	41.0	41.1	40.8	40.9	40.7	41.0	41.4	41.2
Textile mill products.........................	41.2	40.0	40.3	40.3	40.4	39.7	39.8	39.8	39.7	39.5	40.0	39.9	40.9	41.4	41.5
Apparel and other textile products......	37.8	37.3	38.0	37.8	37.5	37.7	36.9	36.9	36.8	36.9	37.3	36.6	36.7	37.4	37.1
Paper and allied products..................	42.5	41.7	42.0	41.6	41.7	41.9	41.2	41.6	41.5	41.3	41.5	41.4	41.5	41.5	41.6
Printing and publishing......................	38.3	38.1	38.2	38.0	38.0	38.2	38.0	38.1	38.0	37.8	37.9	37.3	37.4	37.5	37.2
Chemicals and allied products............	42.5	42.3	42.6	42.4	42.2	42.7	42.1	42.2	42.3	42.0	41.9	41.9	41.9	42.0	41.8
Rubber and miscellaneous plastics products.............................	41.4	41.7	40.8	40.6	40.7	40.6	40.5	40.8	40.5	40.7	41.2	40.9	40.9	41.1	41.6
Leather and leather products.............	37.5	36.4	36.6	35.9	36.2	35.7	36.4	36.3	36.0	36.6	37.5	37.5	37.2	37.3	37.5
SERVICE-PRODUCING.........................	32.8	32.7	32.7	32.7	32.8	32.6	32.6	32.6	32.6	32.6	32.7	32.2	32.7	32.8	32.7
TRANSPORTATION AND PUBLIC UTILITIES...........................	38.6	38.1	38.1	38.1	38.1	37.8	37.8	37.6	37.8	38.8	38.0	37.4	38.2	38.2	38.3
WHOLESALE TRADE...........................	38.5	38.2	38.2	38.2	38.3	38.2	38.3	38.3	38.1	38.2	38.3	37.9	38.3	38.4	38.3
RETAIL TRADE..................................	28.9	28.8	28.8	28.8	28.7	28.6	28.6	28.7	28.7	28.8	28.9	28.0	29.0	29.1	29.0

[p] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

14. Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry, seasonally adjusted

Industry	Annual average		2001									2002			
	2000	2001	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[P]	Apr.[P]
PRIVATE SECTOR (in current dollars)..	$13.75	$14.33	$14.21	$14.24	$14.31	$14.34	$14.40	$14.45	$14.47	$14.54	$14.59	$14.67	$14.62	$14.65	$14.68
Goods-producing.............................	15.40	15.93	15.78	15.86	15.90	15.93	16.01	16.04	16.05	16.05	16.15	16.17	16.28	16.29	16.32
Mining..	17.24	17.65	17.53	17.54	17.73	17.74	17.69	17.67	17.73	17.85	17.80	17.96	17.66	17.72	17.63
Construction.................................	17.88	18.33	18.15	18.22	18.28	18.26	18.35	18.36	18.38	18.46	18.58	18.47	18.68	18.74	18.83
Manufacturing..............................	14.38	14.84	14.72	14.78	14.81	14.86	14.93	14.96	14.97	15.05	15.10	15.16	15.16	15.19	15.19
Excluding overtime....................	13.62	14.15	14.04	14.09	14.13	14.18	14.24	14.28	14.31	14.38	14.41	14.49	14.46	14.45	14.43
Service-producing.........................	13.24	13.85	13.73	13.76	13.84	13.87	13.93	13.98	14.01	14.07	14.13	14.24	14.14	14.18	14.21
Transportation and public utilities........	16.22	16.89	16.74	16.76	16.91	16.88	16.95	17.02	17.09	17.23	17.23	17.39	17.16	17.26	17.26
Wholesale trade...............................	15.20	15.80	15.74	15.70	15.86	15.84	15.81	15.95	15.89	15.91	16.04	16.07	16.19	16.23	16.11
Retail trade.....................................	9.46	9.82	9.74	9.79	9.83	9.84	9.87	9.87	9.91	9.98	9.99	10.05	9.92	9.95	9.97
Finance, insurance, and real estate....	15.07	15.84	15.64	15.74	15.86	15.91	15.99	16.01	16.05	16.07	16.16	16.13	16.08	16.14	16.18
Services..	13.91	14.61	14.48	14.49	14.54	14.61	14.71	14.76	14.81	14.87	14.94	15.07	15.04	15.08	15.13
PRIVATE SECTOR (in constant (1982) dollars)..............................	7.86	8.00	7.94	7.93	7.95	8.00	8.03	8.02	8.06	8.11	8.16	8.21	8.14	8.13	8.10

[P] = preliminary. Dash indicates data not available.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

15. **Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry**

Industry	Annual average		2001									2002			
	2000	2001	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.[p]	Apr.[p]
PRIVATE SECTOR..............................	$13.75	$14.33	$14.27	$14.22	$14.22	$14.27	$14.28	$14.51	$14.50	$14.56	$14.64	$14.67	$14.68	$14.69	$14.72
MINING...	17.24	17.65	17.60	17.49	17.59	17.67	17.53	17.67	17.70	17.79	17.90	17.96	17.83	17.82	17.85
CONSTRUCTION.................................	17.88	18.33	18.07	18.17	18.21	18.32	18.43	18.50	18.55	18.51	18.65	18.47	18.50	18.60	######
MANUFACTURING..............................	14.38	14.84	14.74	14.75	14.79	14.84	14.89	15.01	14.97	15.07	15.19	15.16	15.16	15.17	15.22
Durable goods.................................	14.82	15.28	15.14	15.19	15.24	15.25	15.37	15.49	15.45	15.55	15.68	15.64	15.64	15.64	15.67
Lumber and wood products................	11.93	12.25	12.13	12.16	12.19	12.32	12.37	12.45	12.34	12.41	12.37	12.39	12.32	12.32	12.33
Furniture and fixtures.........................	11.73	12.21	12.07	12.09	12.15	12.24	12.29	12.35	12.39	12.40	12.56	12.59	12.58	12.52	12.52
Stone, clay, and glass products..........	14.53	15.03	14.96	15.03	15.13	15.12	15.17	15.22	15.20	15.16	15.23	15.29	15.26	15.24	15.43
Primary metal industries.....................	16.42	16.96	16.90	16.82	16.96	17.11	17.06	17.27	17.12	17.31	17.26	17.26	17.30	17.30	17.37
Blast furnaces and basic steel products....................................	19.82	20.43	20.37	20.26	20.39	20.48	20.63	20.91	20.55	20.75	20.61	20.62	20.75	20.58	20.80
Fabricated metal products..................	13.87	14.26	14.11	14.23	14.25	14.27	14.34	14.42	14.33	14.44	14.63	14.56	14.53	14.62	14.64
Industrial machinery and equipment...	15.55	15.91	15.74	15.79	15.82	15.90	15.96	16.05	16.09	16.15	16.33	16.34	16.31	16.30	16.33
Electronic and other electrical equipment....................................	13.80	14.53	14.39	14.38	14.51	14.59	14.72	14.84	14.78	14.87	15.01	14.88	14.88	14.92	14.91
Transportation equipment...................	18.45	19.01	18.77	18.83	18.90	18.80	19.08	19.31	19.37	19.51	19.65	19.54	19.65	19.58	19.65
Motor vehicles and equipment..........	18.79	19.36	19.13	19.18	19.25	19.04	19.39	19.68	19.82	19.96	20.19	20.03	20.08	20.09	20.24
Instruments and related products.......	14.43	14.87	14.80	14.75	14.81	14.98	15.00	15.06	15.00	15.03	15.16	15.15	15.22	15.26	15.27
Miscellaneous manufacturing.............	11.63	12.19	12.04	12.10	12.07	12.12	12.23	12.37	12.27	12.46	12.67	12.61	12.51	12.59	12.53
Nondurable goods............................	13.69	14.17	14.12	14.07	14.11	14.23	14.17	14.31	14.28	14.37	14.45	14.46	14.45	14.48	14.55
Food and kindred products................	12.50	12.88	12.79	12.83	12.86	12.93	12.87	12.95	12.91	13.11	13.21	13.16	13.09	13.14	13.23
Tobacco products.............................	21.57	22.28	22.59	23.01	23.17	23.63	21.90	21.70	21.71	22.32	22.21	21.91	22.16	23.02	23.40
Textile mill products..........................	11.16	11.35	11.30	11.29	11.32	11.37	11.39	11.40	11.34	11.43	11.52	11.64	11.61	11.65	11.68
Apparel and other textile products......	9.30	9.47	9.44	9.39	9.45	9.40	9.44	9.56	9.49	9.58	9.47	9.77	9.78	9.90	9.92
Paper and allied products..................	16.25	16.86	16.74	16.72	16.90	16.99	16.87	17.12	17.11	17.13	17.17	17.07	17.04	17.14	17.32
Printing and publishing......................	14.40	14.82	14.75	14.75	14.74	14.83	14.87	15.01	14.96	14.93	15.04	15.04	15.12	15.19	15.23
Chemicals and allied products............	18.15	18.59	18.64	18.52	18.55	18.69	18.54	18.86	18.70	18.74	18.81	18.84	18.96	18.89	18.94
Petroleum and coal products..............	22.00	22.09	22.09	21.83	21.78	22.02	22.20	22.27	22.36	22.38	21.95	22.05	22.46	22.46	22.28
Rubber and miscellaneous plastics products............................	12.85	13.39	13.33	13.30	13.30	13.38	13.44	13.51	13.48	13.53	13.67	13.66	13.61	13.61	13.69
Leather and leather products..............	10.18	10.31	10.37	10.26	10.30	10.25	10.35	10.25	10.21	10.09	10.25	10.27	10.33	10.30	10.34
TRANSPORTATION AND PUBLIC UTILITIES............................	16.22	16.89	16.78	16.70	16.83	16.89	16.97	17.07	17.09	17.23	17.26	17.39	17.44	17.40	17.48
WHOLESALE TRADE............................	15.20	15.80	15.86	15.66	15.77	15.88	15.75	16.03	15.85	15.91	16.16	16.07	16.16	16.08	16.09
RETAIL TRADE....................................	9.46	9.82	9.78	9.78	9.77	9.77	9.79	9.92	9.93	9.98	9.99	10.05	10.03	10.05	10.05
FINANCE, INSURANCE, AND REAL ESTATE.........................	15.07	15.84	15.81	15.74	15.75	15.85	15.84	16.05	15.96	16.04	16.21	16.13	16.20	16.24	16.29
SERVICES...	13.91	14.61	14.58	14.46	14.39	14.46	14.46	14.78	14.80	14.92	15.09	15.07	15.10	15.10	15.09

[p] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

16. Average weekly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry

Industry	Annual average		2001									2002			
	2000	2001	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.ᵖ	Apr.ᵖ
PRIVATE SECTOR															
Current dollars............................	$474.38	$490.09	$486.61	$484.90	$489.17	$493.74	$491.23	$497.69	$493.00	$495.04	$503.62	$492.91	$497.65	$497.99	$499.01
Seasonally adjusted................	–	–	485.98	487.01	489.40	490.43	489.60	492.75	491.98	495.81	499.66	492.91	497.65	497.99	499.01
Constant (1982) dollars.............	272.16	273.64	271.70	269.39	271.46	275.22	273.82	275.88	274.50	276.10	282.30	275.83	277.55	276.20	275.09
MINING..	743.04	766.01	765.60	769.56	768.68	772.18	764.31	777.48	773.49	764.97	771.49	759.71	763.98	762.70	756.84
CONSTRUCTION...........................	702.68	718.54	695.70	728.62	728.40	740.13	739.04	736.30	732.73	720.04	714.30	712.94	712.25	714.24	720.98
MANUFACTURING															
Current dollars............................	598.21	603.99	588.13	600.33	603.43	598.05	607.51	615.41	609.28	613.35	627.35	612.46	610.95	620.45	620.98
Constant (1982) dollars.............	343.21	337.24	328.38	333.52	334.87	333.36	338.63	341.14	339.24	342.08	351.65	342.73	340.74	344.12	342.33
Durable goods..........................	623.92	626.48	607.11	624.31	626.36	617.63	633.24	639.74	631.91	636.00	652.29	638.11	636.14	644.37	645.60
Lumber and wood products.......	489.13	496.13	483.99	497.34	498.57	502.66	509.64	517.92	504.71	503.85	502.33	491.88	491.97	501.42	500.60
Furniture and fixtures................	469.20	474.90	457.45	462.22	468.99	481.03	491.60	489.06	478.25	479.88	501.14	501.48	500.68	507.06	505 64/79
Stone, clay, and glass products..........................	626.24	655.31	638.79	665.83	670.26	669.82	676.58	686.42	674.88	668.56	664.03	660.53	659.23	661.42	683.55
Primary metal industries............	737.26	739.46	730.08	731.67	744.54	742.57	743.82	766.79	737.87	747.79	768.07	752.54	749.09	764.66	767.75
Blast furnaces and basic steel products..................	911.72	909.14	920.72	899.54	919.59	919.55	920.10	959.77	900.09	908.85	902.72	905.22	906.78	921.98	927.68
Fabricated metal products........	590.86	588.94	567.22	589.12	589.95	582.22	595.11	598.43	590.40	594.93	617.39	599.87	598.22	608.19	607.56
Industrial machinery and equipment.............................	656.21	657.54	628.03	644.23	640.71	640.77	640.00	648.42	648.43	649.23	669.53	660.14	655.66	660.15	656.47
Electronic and other electrical equipment.............................	567.18	572.48	554.02	559.38	570.24	558.80	577.02	584.70	584.39	580.85	603.40	572.88	573.27	584.86	581.49
Transportation equipment.........	800.73	796.52	765.82	804.04	799.47	765.16	814.72	809.09	807.73	818.52	841.02	826.54	822.50	832.15	842.99
Motor vehicles and equipment.............................	834.28	826.67	791.98	840.08	839.30	780.64	858.98	844.27	840.37	852.29	890.38	871.31	867.46	881.95	906.75
Instruments and related products.............................	595.96	606.70	594.96	602.48	602.77	605.19	606.00	618.97	609.00	610.22	624.59	612.06	612.96	621.08	613.85
Miscellaneous manufacturing....	453.57	462.00	450.30	458.59	463.49	458.14	468.41	467.59	462.58	464.76	483.99	467.83	471.63	484.72	478.65
Nondurable goods.....................	558.55	571.05	559.15	564.21	568.63	569.20	571.05	582.42	576.91	589.99	589.56	578.40	576.56	583.54	583.46
Food and kindred products.......	521.25	529.37	510.32	522.18	528.55	528.84	535.39	543.90	538.35	544.07	549.54	535.61	524.51	533.48	531.85
Tobacco products.....................	877.90	893.43	885.53	906.59	956.92	952.29	878.19	885.36	881.43	899.50	917.27	878.59	897.69	923.10	940.68
Textile mill products.................	459.79	454.00	444.09	454.99	458.46	444.57	456.74	458.28	540.20	454.91	466.56	464.44	471.37	485.81	491.73
Apparel and other textile products.............................	351.54	353.23	346.45	355.88	357.21	349.68	350.22	350.85	348.28	354.46	365.31	357.58	363.58	378.18	372.99
Paper and allied products.........	690.63	703.06	688.01	690.54	701.35	708.48	695.04	722.46	715.20	717.75	726.29	706.70	701.17	711.31	720.51
Printing and publishing.............	551.52	564.64	554.60	556.08	557.17	563.54	568.03	577.89	571.47	573.31	577.54	560.99	565.49	574.18	569.60
Chemicals and allied products..	771.38	786.36	790.34	783.40	782.81	790.59	778.68	797.78	791.01	794.58	799.43	789.40	787.90	791.49	795.48
Petroleum and coal products....	932.80	943.24	965.33	910.31	934.36	953.47	954.60	955.38	936.88	935.48	906.54	917.28	927.82	911.88	868.92
Rubber and miscellaneous plastics products..................	531.99	544.97	529.20	539.98	543.97	535.20	544.32	556.61	548.64	553.38	574.14	558.69	556.24	559.37	562.66
Leather and leather products....	381.75	375.28	369.17	370.39	378.01	360.80	379.85	377.20	369.60	373.33	385.40	385.13	385.22	387.28	391.89
TRANSPORTATION AND PUBLIC UTILITIES...................	626.09	643.51	641.00	632.93	642.91	650.27	646.56	648.66	646.00	649.57	661.06	650.39	651.88	655.98	659.00
WHOLESALE TRADE....................	585.20	603.56	607.44	598.59	603.99	611.38	603.23	620.36	603.89	607.76	623.78	609.05	616.08	612.65	616.25
RETAIL TRADE............................	273.39	282.82	281.66	280.69	283.33	288.22	286.85	285.70	283.01	284.43	291.71	281.40	286.14	287.43	287.57
FINANCE, INSURANCE, AND REAL ESTATE.................	547.04	547.99	580.23	565.78	570.15	581.70	571.82	589.04	571.37	577.44	594.91	579.07	586.44	586.26	586.44
SERVICES...................................	454.86	477.75	476.77	469.95	471.99	478.63	474.29	483.31	479.52	484.90	496.46	485.25	490.75	489.24	488.92

ᵖ = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision. Dash indicates data not available.

17. Diffusion indexes of employment change, seasonally adjusted

[In percent]

Timespan and year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov	Dec.
	Private nonfarm payrolls, 356 industries											
Over 1-month span:												
1998	63.2	56.2	59.3	60.2	58.9	57.1	55.4	58.4	54.8	55.0	58.2	56.4
1999	55.1	59.6	52.8	57.2	58.2	54.2	57.1	54.4	55.2	57.9	59.9	56.8
2000	55.7	59.3	61.0	54.2	47.7	60.5	57.8	55.1	52.0	54.8	55.1	54.2
2001	53.7	50.4	55.8	45.0	46.6	44.3	45.5	43.9	44.1	38.7	38.7	41.8
2002	48.9	45.9	45.0	–	–	–	–	–	–	–	–	–
Over 3-month span:												
1998	65.3	66.1	64.6	65.7	62.2	57.9	57.5	58.4	59.1	59.2	59.3	59.2
1999	60.8	57.8	58.5	55.8	58.1	57.9	57.2	59.2	59.8	59.1	61.0	60.6
2000	61.6	63.3	61.9	56.2	55.1	57.9	61.5	56.4	54.1	53.3	55.7	53.3
2001	51.7	54.1	48.6	49.2	42.5	42.4	40.5	39.9	38.8	35.8	35.6	37.7
2002	41.1	42.8	44.9	–	–	–	–	–	–	–	–	–
Over 6-month span:												
1998	70.4	67.4	65.0	62.5	63.6	60.5	59.2	58.6	57.9	59.6	60.6	59.9
1999	59.8	59.8	58.2	60.3	56.7	59.2	61.8	60.8	62.2	61.2	62.3	64.9
2000	63.5	60.6	62.6	63.7	61.5	55.5	56.1	58.6	54.2	54.8	51.8	54.2
2001	52.0	50.6	48.6	45.3	44.1	38.5	37.1	35.6	35.1	35.7	35.3	35.6
2002	37.8	–	–	–	–	–	–	–	–	–	–	–
Over 12-month span:												
1998	69.7	67.6	67.4	66.0	64.0	62.7	61.9	62.0	60.9	59.3	60.8	58.8
1999	61.2	60.2	58.2	60.8	60.8	61.6	62.2	61.3	63.9	63.0	61.3	60.9
2000	62.5	63.0	61.8	59.5	58.4	56.8	55.7	56.5	54.2	53.4	53.0	51.8
2001	49.6	47.7	45.0	43.1	40.5	39.8	38.4	36.8	34.7	–	–	–
2002	–	–	–	–	–	–	–	–	–	–	–	–
	Manufacturing payrolls, 139 industries											
Over 1-month span:												
1998	57.4	51.5	53.7	53.3	43.8	48.2	38.2	51.5	41.9	41.5	41.2	43.4
1999	46.9	44.5	43.0	42.3	50.4	39.3	51.5	39.3	45.2	46.3	53.3	46.7
2000	44.9	56.6	55.5	46.7	41.2	54.8	53.7	38.6	34.6	41.5	43.8	44.1
2001	37.9	32.4	41.5	31.3	29.4	33.1	39.0	27.6	36.0	29.4	25.7	29.4
2002	39.0	40.4	47.1	–	–	–	–	–	–	–	–	–
Over 3-month span:												
1998	59.6	59.6	55.9	50.4	46.7	37.9	41.5	41.5	41.9	38.2	36.8	40.8
1999	41.2	39.0	38.2	41.8	40.8	45.2	39.0	45.2	40.8	44.9	46.3	46.0
2000	50.0	54.0	52.9	42.3	43.0	48.5	48.2	33.6	28.7	30.5	39.0	35.7
2001	28.3	29.4	24.6	26.5	22.4	24.6	21.0	19.9	19.9	21.0	17.6	20.2
2002	25.7	34.2	37.1	–	–	–	–	–	–	–	–	–
Over 6-month span:												
1998	63.2	54.4	50.4	40.4	44.5	40.1	37.5	36.4	34.9	40.1	37.1	34.2
1999	36.0	38.2	37.5	41.2	36.8	39.7	43.0	41.5	46.0	40.4	46.3	51.5
2000	51.5	44.5	48.5	55.1	43.8	34.9	33.5	34.6	30.1	29.4	25.0	27.9
2001	26.8	25.4	19.9	20.6	20.2	15.1	13.2	14.0	11.8	14.7	18.8	18.8
2002	20.2	–	–	–	–	–	–	–	–	–	–	–
Over 12-month span:												
1998	54.8	52.2	51.8	46.7	40.4	40.1	38.2	37.5	36.4	34.6	35.7	34.2
1999	38.6	34.6	32.4	36.0	37.9	39.0	40.1	40.4	44.5	46.0	44.9	44.5
2000	46.3	45.2	41.2	37.9	33.8	31.3	31.3	31.3	27.6	25.4	24.3	21.3
2001	19.1	16.5	14.7	16.2	15.1	12.1	12.9	12.5	12.5	–	–	–
2002	–	–	–	–	–	–	–	–	–	–	–	–

Dash indicates data not available.

NOTE: Figures are the percent of industries with employment increasing plus one-half of the industries with unchanged employment, where 50 percent indicates an equal balance between industries with inceasing and decreasing employment.

Data for the 2 most recent months shown in each span are preliminary. See the "Definitions" in this section. See "Notes on the data" for a description of the most recent benchmark revision.

18. Establishment size and employment covered under UI, private ownership, by major industry division, first quarter 2000

Industry, establishments, and employment	Total	Size of establishments								
		Fewer than 5 workers[1]	5 to 9 workers	10 to 19 workers	20 to 49 workers	50 to 99 workers	100 to 249 workers	250 to 499 workers	500 to 999 workers	1,000 or more workers
Total, all industries[2]										
Establishments, first quarter	7,531,330	4,413,181	1,302,488	850,411	590,662	206,415	119,172	31,311	11,713	5,977
Employment, March	108,195,174	6,831,146	8,615,974	11,471,927	17,878,154	14,212,796	17,895,603	10,658,780	7,965,372	12,665,422
Agriculture, forestry, and fishing										
Establishments, first quarter	200,289	123,880	37,646	22,736	11,179	2,875	1,473	370	106	24
Employment, March	1,702,493	179,158	248,989	302,599	326,510	196,681	216,628	126,181	69,476	36,271
Mining										
Establishments, first quarter	27,284	14,102	4,323	3,728	3,202	1,023	591	214	76	25
Employment, March	524,514	22,082	28,959	51,183	97,241	69,762	89,714	74,836	52,916	37,821
Construction										
Establishments, first quarter	747,563	477,549	126,844	76,253	46,543	13,242	5,748	1,053	272	59
Employment, March	6,310,456	703,310	831,405	1,024,819	1,389,870	898,785	846,893	347,400	182,357	85,617
Manufacturing										
Establishments, first quarter	405,838	147,029	67,385	61,150	61,487	30,568	24,264	8,646	3,598	1,711
Employment, March	18,433,795	251,154	453,397	842,691	1,922,360	2,144,676	3,739,308	2,977,743	2,446,323	3,656,143
Transportation and public utilities										
Establishments, first quarter	315,413	174,645	49,173	36,475	30,720	12,952	7,913	2,127	892	516
Employment, March	6,678,516	272,380	325,334	498,572	945,800	895,012	1,190,459	726,615	618,630	1,205,714
Wholesale trade										
Establishments, first quarter	664,094	400,335	110,091	77,321	52,153	15,187	7,019	1,478	414	96
Employment, March	6,947,770	621,924	729,753	1,046,983	1,565,359	1,035,060	1,035,170	496,350	274,988	142,183
Retail trade										
Establishments, first quarter	1,458,626	623,529	329,260	235,941	179,053	57,988	26,380	4,982	1,169	324
Employment, March	22,807,395	1,154,942	2,204,569	3,190,042	5,437,335	3,943,391	3,880,016	1,659,975	764,056	573,069
Finance, insurance, and real estate										
Establishments, first quarter	671,294	438,402	114,349	62,141	35,549	11,618	6,025	1,799	898	513
Employment, March	7,379,831	714,292	751,197	826,817	1,065,116	797,168	912,396	621,570	615,246	1,076,029
Services										
Establishments, first quarter	2,890,313	1,879,338	451,715	271,168	169,867	60,864	39,727	10,640	4,286	2,708
Employment, March	37,110,557	2,772,133	2,967,673	3,643,823	5,102,854	4,225,937	5,980,102	3,627,319	2,939,641	5,851,075

[1] Includes establishments that reported no workers in March 2000.

[2] Includes data for nonclassifiable establishments, not shown separately.

NOTE: Detail may not add to totals due to rounding.

19. Annual data: establishments, employment, and wages covered under UI and UCFE by ownership

Year	Average establishments	Average annual employment	Total annual wages (in thousands)	Average annual wages per employee	Average weekly wage
Total covered (UI and UCFE)					
1991	6,382,523	106,884,831	$2,626,972,030	$24,578	$473
1992	6,532,608	107,413,728	2,781,676,477	25,897	498
1993	6,679,934	109,422,571	2,884,472,282	26,361	507
1994	6,826,677	112,611,287	3,033,676,678	26,939	518
1995	7,040,677	115,487,841	3,215,921,236	27,846	536
1996	7,189,168	117,963,132	3,414,514,808	28,946	557
1997	7,369,473	121,044,432	3,674,031,718	30,353	584
1998	7,634,018	124,183,549	3,967,072,423	31,945	614
1999	7,820,860	127,042,282	4,235,579,204	33,340	641
2000	7,879,116	129,877,063	4,587,708,584	35,323	679
UI covered					
1991	6,336,151	103,755,832	$2,524,937,018	$24,335	$468
1992	6,485,473	104,288,324	2,672,081,827	25,622	493
1993	6,632,221	106,351,431	2,771,023,411	26,055	501
1994	6,778,300	109,588,189	2,918,684,128	26,633	512
1995	6,990,594	112,539,795	3,102,353,355	27,567	530
1996	7,137,644	115,081,246	3,298,045,286	28,658	551
1997	7,317,363	118,233,942	3,553,933,885	30,058	578
1998	7,586,767	121,400,660	3,845,494,089	31,676	609
1999	7,771,198	124,255,714	4,112,169,533	33,094	636
2000	7,828,861	127,005,574	4,454,966,824	35,077	675
Private industry covered					
1991	6,162,684	89,007,096	$2,152,021,705	$24,178	$465
1992	6,308,719	89,349,803	2,282,598,431	25,547	491
1993	6,454,381	91,202,971	2,365,301,493	25,934	499
1994	6,596,158	94,146,344	2,494,458,555	26,496	510
1995	6,803,454	96,894,844	2,658,927,216	27,441	528
1996	6,946,858	99,268,446	2,837,334,217	28,582	550
1997	7,121,182	102,175,161	3,071,807,287	30,064	578
1998	7,381,518	105,082,368	3,337,621,699	31,762	611
1999	7,560,567	107,619,457	3,577,738,557	33,244	639
2000	7,622,274	110,015,333	3,887,626,769	35,337	680
State government covered					
1991	58,499	4,005,321	$108,672,127	$27,132	$522
1992	58,801	4,044,914	112,405,340	27,789	534
1993	59,185	4,088,075	117,095,062	28,643	551
1994	60,686	4,162,944	122,879,977	29,518	568
1995	60,763	4,201,836	128,143,491	30,497	586
1996	62,146	4,191,726	131,605,800	31,397	604
1997	65,352	4,214,451	137,057,432	32,521	625
1998	67,347	4,240,779	142,512,445	33,605	646
1999	70,538	4,296,673	149,011,194	34,681	667
2000	65,096	4,370,160	158,618,365	36,296	698
Local government covered					
1991	114,936	10,742,558	$264,215,610	$24,595	$473
1992	117,923	10,892,697	277,045,557	25,434	489
1993	118,626	11,059,500	288,594,697	26,095	502
1994	121,425	11,278,080	301,315,857	26,717	514
1995	126,342	11,442,238	315,252,346	27,552	530
1996	128,640	11,621,074	329,105,269	28,320	545
1997	130,829	11,844,330	345,069,166	29,134	560
1998	137,902	12,077,513	365,359,945	30,251	582
1999	140,093	12,339,584	385,419,781	31,234	601
2000	141,491	12,620,081	408,721,690	32,387	623
Federal Government covered (UCFE)					
1991	46,372	3,128,999	$102,035,012	$32,609	$627
1992	47,136	3,125,404	109,594,650	35,066	674
1993	47,714	3,071,140	113,448,871	36,940	710
1994	48,377	3,023,098	114,992,550	38,038	731
1995	50,083	2,948,046	113,567,881	38,523	741
1996	51,524	2,881,887	116,469,523	40,414	777
1997	52,110	2,810,489	120,097,833	42,732	822
1998	47,252	2,782,888	121,578,334	43,688	840
1999	49,661	2,786,567	123,409,672	44,287	852
2000	50,256	2,871,489	132,741,760	46,228	889

NOTE: Detail may not add to totals due to rounding.

20. Annual data: establishments, employment, and wages covered under UI and UCFE, by State

State	Average establishments 2000	Average establishments 1999-2000 change	Average annual employment 2000	Average annual employment 1999-2000 change	Total annual wages (in thousands) 2000	Total annual wages (in thousands) 1999-2000 change	Average weekly wage 2000	Average weekly wage 1999-2000 change
Total United States	7,879,116	58,256	129,877,063	2,834,781	$4,587,708,584	$352,129,380	$679	$38
Alabama	112,328	454	1,877,963	6,911	54,538,027	1,970,401	558	18
Alaska	18,820	32	275,607	6,674	9,685,341	532,709	676	22
Arizona	115,171	2,589	2,220,712	70,174	72,417,033	6,772,271	627	40
Arkansas	72,240	406	1,130,891	17,750	29,761,939	1,520,062	506	18
California	1,026,568	-33,271	14,867,006	472,932	612,318,313	71,430,084	792	69
Colorado	148,479	6,278	2,186,656	81,404	81,273,035	9,292,033	715	57
Connecticut	107,787	1,696	1,674,728	22,363	76,176,856	5,650,414	875	54
Delaware	24,751	584	406,350	4,210	14,845,185	707,255	703	27
District of Columbia	28,409	1,474	637,292	21,588	33,753,742	2,423,907	1,019	40
Florida	444,731	9,134	7,060,986	216,337	215,780,400	17,731,492	588	32
Georgia	225,040	6,628	3,883,005	88,250	132,853,189	10,161,751	658	36
Hawaii	34,027	1,564	553,185	15,440	16,942,944	921,218	589	16
Idaho	45,399	1,128	563,193	20,785	15,600,825	1,474,196	533	32
Illinois	322,324	2,721	5,940,772	90,253	226,012,936	13,664,320	732	34
Indiana	152,846	-1,089	2,936,634	29,778	91,086,141	3,800,930	596	19
Iowa	97,091	2,479	1,443,394	12,412	40,312,331	1,743,623	537	19
Kansas	80,477	1,036	1,313,742	14,945	38,571,763	2,164,568	565	26
Kentucky	107,740	2,403	1,762,949	31,482	50,774,667	2,669,580	554	20
Louisiana	118,216	1,549	1,869,219	21,317	52,131,235	1,838,194	536	13
Maine	44,865	956	590,818	17,005	16,344,365	916,386	532	15
Maryland	146,559	1,117	2,405,510	58,631	87,548,876	6,606,334	700	37
Massachusetts	187,391	344	3,275,135	83,493	145,184,150	16,396,342	852	76
Michigan	260,885	2,244	4,585,211	82,445	169,702,272	8,726,750	712	24
Minnesota	155,711	4,932	2,608,543	57,751	92,377,120	6,959,859	681	37
Mississippi	63,970	229	1,137,304	-1,880	28,665,889	879,567	485	16
Missouri	163,080	2,303	2,677,110	31,687	84,020,093	4,745,993	604	28
Montana	38,349	1,585	379,094	7,855	9,202,211	567,364	467	20
Nebraska	51,838	4	882,918	16,308	24,449,709	1,370,028	533	21
Nevada	48,126	194	1,017,902	41,975	32,853,744	2,392,271	621	21
New Hampshire	45,924	494	606,543	15,318	21,069,920	2,067,493	668	50
New Jersey	270,384	-15,337	3,877,572	85,195	169,355,641	13,725,235	840	51
New Mexico	47,987	693	717,243	16,339	19,722,105	1,311,285	529	24
New York	529,103	4,797	8,471,416	178,874	384,241,451	34,472,229	872	61
North Carolina	222,234	7,270	3,862,782	58,413	120,007,446	7,922,007	597	30
North Dakota	23,297	240	309,223	3,263	7,632,602	365,713	475	18
Ohio	280,988	1,073	5,513,217	62,090	179,218,763	8,080,924	625	21
Oklahoma	89,298	1,368	1,452,166	29,357	39,191,626	2,464,854	519	23
Oregon	109,050	-1,296	1,608,069	32,067	52,703,467	4,049,166	630	36
Pennsylvania	315,284	13,267	5,558,076	98,602	189,058,210	10,557,733	654	25
Rhode Island	33,327	621	467,602	10,766	15,250,760	1,011,495	627	28
South Carolina	109,370	-1,993	1,820,138	27,993	51,289,516	2,664,765	542	20
South Dakota	27,145	437	364,119	8,334	9,030,727	574,920	477	20
Tennessee	125,247	-51	2,667,230	40,186	81,495,110	4,055,765	588	21
Texas	489,795	8,425	9,289,286	272,645	324,579,638	27,952,132	672	39
Utah	66,144	2,282	1,044,143	26,519	30,518,822	2,131,853	562	26
Vermont	23,870	805	296,462	8,473	8,571,976	624,326	556	25
Virginia	192,745	3,212	3,427,954	100,832	120,567,926	10,689,950	676	41
Washington	221,150	9,010	2,706,462	62,732	100,381,521	5,904,038	713	26
West Virginia	46,830	21	686,622	6,014	18,461,154	752,890	517	17
Wisconsin	145,871	977	2,736,054	44,603	83,980,263	4,294,806	590	21
Wyoming	20,861	238	230,857	5,892	6,195,607	425,897	516	23
Puerto Rico	52,371	202	1,026,175	23,785	19,306,364	709,126	362	5
Virgin Islands	3,255	32	42,349	1,411	1,173,955	104,996	533	31

NOTE: Detail may not add to totals due to rounding.

21. Annual data: Employment and average annual pay for all workers covered under UI and UCFE in the 316 largest U.S. counties

County[1]	Employment			Average annual pay	
	2000	Percent change, 1999-2000[2]	Ranked by percent change, 1999-2000[3]	2000	Percent change, 1999-2000[2]
United States[4]	129,877,063	2.2	–	35,323	5.9
Jefferson, AL	384,662	.6	256	34,026	3.9
Madison, AL	154,356	1.7	186	35,837	5.0
Mobile, AL	169,469	-.1	291	28,623	2.4
Montgomery, AL	131,988	.2	285	28,894	3.2
Tuscaloosa, AL	76,499	.8	244	29,064	2.5
Anchorage, AK	129,700	2.0	164	36,659	2.7
Maricopa, AZ	1,544,971	3.6	48	35,110	7.8
Pima, AZ	328,426	3.1	77	29,194	3.5
Pulaski, AR	243,157	.4	272	30,799	3.8
Sebastian, AR	75,197	1.1	228	27,011	4.8
Washington, AR	80,045	3.3	61	26,408	3.8
Alameda, CA	696,242	3.0	84	45,091	9.8
Contra Costa, CA	336,691	3.1	78	42,318	3.7
Fresno, CA	322,759	1.9	169	26,162	4.8
Kern, CA	238,250	2.1	153	28,572	5.7
Los Angeles, CA	4,098,154	1.7	187	39,651	4.9
Marin, CA	111,645	2.1	154	42,600	8.5
Monterey, CA	164,646	2.5	118	29,962	5.1
Orange, CA	1,394,414	3.6	49	39,247	4.8
Placer, CA	107,182	8.9	3	33,386	5.3
Riverside, CA	469,467	5.3	12	29,136	4.7
Sacramento, CA	573,942	2.6	107	37,732	7.2
San Bernardino, CA	528,437	3.0	85	29,901	3.8
San Diego, CA	1,195,116	3.0	86	37,535	8.1
San Francisco, CA	609,138	3.7	43	57,532	12.0
San Joaquin, CA	201,070	3.1	79	29,237	4.7
San Luis Obispo, CA	94,883	3.6	50	28,096	6.2
San Mateo, CA	378,494	5.3	13	67,051	30.4
Santa Barbara, CA	176,901	3.0	87	32,566	8.2
Santa Clara, CA	1,030,633	6.1	9	76.213	24.7
Santa Cruz, CA	101,833	3.3	62	35,819	15.5
Solano, CA	117,217	3.7	44	31,670	8.4
Sonoma, CA	190,946	3.1	80	35,715	11.3
Stanislaus, CA	160,948	1.7	188	28,201	4.4
Tulare, CA	132,986	3.6	51	23,750	4.6
Ventura, CA	287,611	3.4	57	37,069	9.1
Yolo, CA	84,565	1.5	201	33,438	3.3
Adams, CO	144,806	3.6	52	33,428	4.8
Arapahoe, CO	284,236	3.9	38	46,254	7.8
Boulder, CO	179,719	8.2	4	45,564	13.9
Denver, CO	469,137	3.2	69	44,343	11.6
El Paso, CO	237,739	3.4	58	33,039	7.7
Jefferson, CO	210,519	2.6	108	36,195	5.2
Larimer, CO	119,155	5.1	16	32,394	7.9
Fairfield, CT	427,557	1.1	229	61,156	8.5
Hartford, CT	501,562	1.1	230	43,656	6.2
New Haven, CT	367,343	1.1	231	38,355	5.4
New London, CT	123,039	.6	257	36,757	3.8
New Castle, DE	281,920	-.7	301	40,491	4.5
Washington, DC	637,292	3.5	54	52,964	4.1
Alachua, FL	117,658	2.5	119	26,155	3.9
Brevard, FL	181,314	3.3	63	32,101	7.2
Broward, FL	644,192	3.3	64	33,234	6.5
Collier, FL	103,264	6.9	6	29,962	6.9
Duval, FL	434,219	4.1	32	32,777	4.6
Escambia, FL	125,666	1.0	235	26,709	4.5
Hillsborough, FL	588,792	2.5	120	31,707	4.8
Lee, FL	162,304	4.4	25	28,148	6.4
Leon, FL	141,978	2.2	142	29,249	4.1
Manatee, FL	(^{5})	(^{5})	(^{5})	(^{5})	(^{5})
Marion, FL	83,319	1.7	189	24,953	3.3
Miami-Dade, FL	980,394	2.3	135	33,333	3.9
Orange, FL	611,469	3.2	70	31,123	4.6
Palm Beach, FL	481,395	4.1	33	35,233	7.3
Pinellas, FL	436,390	4.2	29	31,263	5.4
Polk, FL	183,222	2.6	109	27,881	3.5
Sarasota, FL	(^{5})	(^{5})	(^{5})	(^{5})	(^{5})
Seminole, FL	139,610	4.6	23	30,835	6.9
Volusia, FL	141,652	1.4	207	25,079	5.5
Bibb, GA	88,790	-1.2	308	29,299	3.2
Chatham, GA	122,785	1.3	214	29,650	1.9
Clayton, GA	116,368	-.6	296	36,774	6.7
Cobb, GA	301,183	1.3	215	38,792	5.4

See footnotes at end of table.

21. Continued—Annual data: Employment and average annual pay for all workers covered under UI and UCFE in the 316 largest U.S. counties

County[1]	Employment			Average annual pay	
	2000	Percent change, 1999-2000[2]	Ranked by percent change, 1999-2000[3]	2000	Percent change, 1999-2000[2]
Dekalb, GA	310,659	-.6	297	38,614	4.9
Fulton, GA	754,368	2.7	103	47,060	8.5
Gwinnett, GA	281,654	4.1	34	39,051	6.0
Muscogee, GA	98,315	-.1	292	27,744	3.7
Richmond, GA	106,260	-.6	298	28,592	3.6
Honolulu, HI	407,935	2.6	110	31,874	2.8
Ada, ID	177,741	6.5	8	34,460	10.0
Champaign, IL	90,429	2.8	96	29,183	4.2
Cook, IL	2,687,795	1.3	216	42,898	5.8
Du Page, IL	582,352	1.7	190	42,570	3.6
Kane, IL	193,410	2.9	91	32,173	.1
Lake, IL	310,689	3.1	81	42,620	6.7
McHenry, IL	87,258	1.9	170	32,007	2.0
McLean, IL	84,324	.6	258	34,254	4.1
Madison, IL	94,550	.4	273	28,974	2.9
Peoria, IL	102,801	.1	287	31,387	1.6
Rock Island, IL	80,273	.8	245	33,525	4.5
St. Clair, IL	89,963	2.2	143	26,878	2.6
Sangamon, IL	144,286	4.4	26	34,764	1.7
Will, IL	142,355	3.5	55	32,313	2.1
Winnebago, IL	143,760	.5	265	31,499	2.0
Allen, IN	189,425	.3	281	32,279	3.0
Elkhart, IN	122,468	.6	259	30,339	2.3
Hamilton, IN	77,452	3.0	88	37,931	7.9
Lake, IN	199,421	-.6	299	31,564	4.0
Marion, IN	605,903	1.6	194	36,473	3.2
St. Joseph, IN	129,558	.5	266	29,657	3.5
Tippecanoe, IN	77,377	1.1	232	31,083	4.0
Vanderburgh, IN	109,904	.7	251	29,569	3.2
Linn, IA	121,968	2.1	155	34,097	4.9
Polk, IA	263,940	1.3	217	33,666	2.5
Scott, IA	87,113	-.4	295	29,067	3.9
Johnson, KS	287,797	2.8	97	37,247	6.7
Sedgwick, KS	249,846	.0	289	32,696	2.9
Shawnee, KS	100,223	2.4	130	29,375	3.2
Wyandotte, KS	79,746	1.8	177	34,592	2.9
Fayette, KY	172,031	1.8	178	30,713	3.8
Jefferson, KY	439,103	1.4	208	33,334	3.9
Caddo, LA	119,449	.3	282	28,767	3.2
Calcasieu, LA	83,976	.1	288	28,226	.9
East Baton Rouge, LA	246,434	2.7	104	29,257	1.6
Jefferson, LA	214,680	-.7	302	28,051	2.1
Lafayette, LA	114,059	2.3	136	29,911	5.5
Orleans, LA	263,551	1.9	171	31,694	1.3
Cumberland, ME	166,757	3.7	45	30,752	1.1
Anne Arundel, MD	194,018	5.3	14	35,461	7.3
Baltimore, MD	358,117	1.2	222	34,119	4.7
Frederick, MD	77,323	4.9	22	30,847	5.9
Howard, MD	128,678	3.2	71	37,897	5.1
Montgomery, MD	447,314	5.0	20	43,708	5.8
Prince Georges, MD	303,262	3.3	65	37,060	6.9
Baltimore City, MD	386,411	.8	246	38,579	4.5
Barnstable, MA	88,589	3.7	46	29,726	.0
Bristol, MA	221,539	1.3	218	30,785	4.6
Essex, MA	305,382	2.5	121	39,154	8.8
Hampden, MA	204,303	1.9	172	32,220	4.8
Middlesex, MA	846,931	3.1	82	52,091	11.8
Norfolk, MA	325,018	2.4	131	43,368	10.4
Plymouth, MA	166,482	1.3	219	33,931	6.3
Suffolk, MA	608,285	3.3	66	56,699	11.6
Worcester, MA	321,131	2.5	122	37,657	10.8
Genesee, MI	165,297	-1.4	313	36,324	1.4
Ingham, MI	174,315	2.0	165	34,963	5.6
Kalamazoo, MI	118,342	-.1	293	32,675	2.3
Kent, MI	347,707	1.6	195	33,996	2.6
Macomb, MI	337,504	.3	283	40,904	3.5
Oakland, MI	768,629	1.0	236	44,500	4.2
Ottawa, MI	118,711	1.8	179	31,947	3.5
Saginaw, MI	95,474	-.8	304	34,672	2.5
Washtenaw, MI	195,624	.5	267	40,182	5.3
Wayne, MI	866,282	1.2	223	42,440	3.5
Anoka, MN	108,989	3.8	40	33,928	4.5
Dakota, MN	153,364	2.6	111	34,362	4.7
Hennepin, MN	874,693	2.1	156	43,816	7.1
Olmsted, MN	82,670	3.9	39	36,104	3.1

See footnotes at end of table.

21. Continued—Annual data: Employment and average annual pay for all workers covered under UI and UCFE in the 316 largest U.S. counties

County[1]	Employment			Average annual pay	
	2000	Percent change, 1999-2000[2]	Ranked by percent change, 1999-2000[3]	2000	Percent change, 1999-2000[2]
Ramsey, MN	332,929	1.6	196	39,069	5.8
St. Louis, MN	94,926	1.4	209	28,903	4.6
Stearns, MN	76,292	3.1	83	27,584	4.2
Harrison, MS	89,745	.4	274	25,442	4.8
Hinds, MS	136,949	-1.2	309	30,578	4.6
Boone, MO	75,785	2.8	98	27,361	3.1
Clay, MO	84,159	.0	290	32,207	6.4
Greene, MO	142,508	2.4	132	26,971	3.2
Jackson, MO	393,761	.4	275	36,056	6.2
St. Charles, MO	95,799	3.2	72	29,515	3.8
St. Louis, MO	646,858	.8	247	38,145	5.6
St. Louis City, MO	250,878	.4	276	38,612	4.1
Douglas, NE	330,128	2.1	157	32,356	4.1
Lancaster, NE	146,433	1.8	180	28,511	3.9
Clark, NV	697,575	5.3	15	32,131	3.4
Washoe, NV	189,102	3.2	73	32,748	4.4
Hillsborough, NH	193,796	2.7	105	39,212	9.1
Rockingham, NH	129,494	4.1	35	35,823	9.8
Atlantic, NJ	140,141	-.2	294	31,068	3.4
Bergen, NJ	448,513	.5	268	46,306	7.0
Burlington, NJ	180,165	.8	248	37,597	4.7
Camden, NJ	199,768	-1.1	307	35,130	3.2
Essex, NJ	363,942	1.6	197	44,653	3.5
Gloucester, NJ	86,667	.7	252	32,055	2.8
Hudson, NJ	238,388	3.4	59	47,427	10.2
Mercer, NJ	210,031	3.3	67	44,658	5.2
Middlesex, NJ	392,427	.6	260	46,487	5.8
Monmouth, NJ	233,285	2.5	123	39,695	5.4
Morris, NJ	275,499	2.8	99	60,487	19.0
Ocean, NJ	129,093	2.5	124	30,447	4.6
Passaic, NJ	177,364	.6	261	37,759	2.0
Somerset, NJ	173,571	4.1	36	54,781	5.1
Union, NJ	237,176	2.2	144	45,282	4.9
Bernalillo, NM	307,705	2.6	112	30,184	4.1
Albany, NY	230,962	1.4	210	35,795	6.1
Bronx, NY	212,982	2.2	145	32,850	2.7
Broome, NY	99,613	1.2	224	29,658	3.6
Dutchess, NY	109,949	1.9	173	36,065	2.2
Erie, NY	459,828	1.0	237	31,489	3.0
Kings, NY	441,916	2.3	137	30,760	3.7
Monroe, NY	399,602	.9	242	35,423	1.8
Nassau, NY	598,538	1.6	198	40,023	4.4
New York, NY	2,382,175	3.2	74	72,572	10.3
Niagara, NY	78,186	.2	286	31,112	3.7
Oneida, NY	110,684	1.4	211	27,300	3.4
Onondaga, NY	252,476	.7	253	32,499	3.4
Orange, NY	119,571	1.6	199	29,357	4.6
Queens, NY	480,676	1.3	220	34,986	4.4
Richmond, NY	88,245	1.9	174	32,149	4.2
Rockland, NY	106,361	1.4	212	37,264	4.3
Suffolk, NY	578,401	2.3	138	37,862	6.6
Westchester, NY	405,440	2.3	139	47,066	8.3
Buncombe, NC	106,036	.5	269	27,652	3.8
Catawba, NC	101,321	2.6	113	28,210	4.0
Cumberland, NC	109,858	1.2	225	26,112	3.9
Durham, NC	167,191	2.9	92	49,359	12.6
Forsyth, NC	181,619	1.8	181	34,011	6.3
Gaston, NC	77,176	-3.6	314	28,335	4.0
Guilford, NC	279,889	.6	262	32,216	2.5
Mecklenburg, NC	514,223	3.8	41	40,538	5.4
New Hanover, NC	87,019	.4	277	28,560	4.3
Wake, NC	383,705	3.3	68	35,377	7.4
Cass, ND	81,823	2.2	146	27,801	4.1
Butler, OH	126,189	2.6	114	31,502	1.7
Cuyahoga, OH	817,572	.9	243	36,520	4.2
Franklin, OH	701,913	2.2	147	34,970	4.6
Hamilton, OH	566,965	.8	249	37,598	3.9
Lake, OH	102,320	1.5	202	30,735	2.1
Lorain, OH	105,988	2.3	140	32,013	1.9
Lucas, OH	238,450	.6	263	32,255	2.3
Mahoning, OH	112,531	-.6	300	25,966	3.0
Montgomery, OH	303,352	.4	278	34,532	2.6
Stark, OH	175,535	1.7	191	28,505	2.1
Summit, OH	266,001	.4	279	32,735	4.2

See footnotes at end of table.

21. Continued—Annual data: Employment and average annual pay for all workers covered under UI and UCFE in the 316 largest U.S. counties

County[1]	Employment			Average annual pay	
	2000	Percent change, 1999-2000[2]	Ranked by percent change, 1999-2000[3]	2000	Percent change, 1999-2000[2]
Trumbull, OH	94,382	-1.3	311	32,785	1.0
Oklahoma, OK	414,239	2.9	93	29,216	4.6
Tulsa, OK	340,671	2.5	125	31,157	3.7
Clackamas, OR	133,065	2.2	148	32,482	4.0
Lane, OR	139,710	1.1	233	27,877	3.5
Marion, OR	127,558	2.0	166	28,116	2.9
Multnomah, OR	453,274	2.1	158	36,796	6.2
Washington, OR	224,033	4.3	27	44,459	13.4
Allegheny, PA	711,068	1.2	226	36,727	2.5
Berks, PA	168,068	1.8	182	32,007	3.3
Bucks, PA	244,317	2.5	126	34,059	3.4
Chester, PA	216,777	2.5	127	43,762	6.9
Cumberland, PA	123,998	-1.3	312	32,811	3.2
Dauphin, PA	172,465	2.1	159	33,680	2.2
Delaware, PA	212,540	1.0	238	36,828	5.5
Erie, PA	131,700	2.5	128	28,368	1.8
Lackawanna, PA	98,383	-.7	303	27,663	7.5
Lancaster, PA	218,280	1.8	183	30,809	4.6
Lehigh, PA	171,175	2.0	167	35,274	2.5
Luzerne, PA	143,066	2.2	149	27,855	2.7
Montgomery, PA	481,011	2.3	141	43,810	6.5
Northampton, PA	87,846	3.0	89	30,767	3.1
Philadelphia, PA	668,793	1.5	203	39,700	4.5
Westmoreland, PA	134,436	1.0	239	27,992	1.3
York, PA	167,757	2.2	150	30,926	3.3
Providence, RI	290,809	1.7	192	33,410	4.0
Charleston, SC	182,793	1.3	221	27,680	4.8
Greenville, SC	233,062	2.6	115	31,281	4.0
Horry, SC	99,124	1.7	193	22,883	5.4
Lexington, SC	81,341	2.0	168	27,505	3.5
Richland, SC	207,508	.6	264	29,627	4.1
Spartanburg, SC	119,791	.5	270	30,596	3.4
Minnehaha, SD	105,837	3.2	75	28,212	3.7
Davidson, TN	434,901	1.5	204	34,863	5.4
Hamilton, TN	188,161	1.8	184	30,574	4.0
Knox, TN	202,688	3.4	60	30,090	4.1
Rutherford, TN	76,993	2.5	129	31,132	3.6
Shelby, TN	500,255	1.0	240	34,357	2.5
Bell, TX	87,850	2.1	160	25,193	4.1
Bexar, TX	648,942	2.2	151	29,923	5.2
Brazoria, TX	75,417	2.8	100	34,367	3.3
Cameron, TX	109,115	5.4	11	21,553	2.6
Collin, TX	167,956	5.9	10	40,509	5.8
Dallas, TX	1,567,626	4.2	30	44,381	7.7
Denton, TX	119,722	3.7	47	29,298	4.0
El Paso, TX	251,557	1.5	205	25,069	3.2
Fort Bend, TX	87,763	2.4	133	35,801	5.1
Galveston, TX	86,844	-1.0	306	29,518	4.0
Harris, TX	1,840,442	2.8	101	41,869	7.7
Hidalgo, TX	163,443	7.1	5	21,671	2.7
Jefferson, TX	120,815	1.1	234	31,277	.8
Lubbock, TX	115,422	1.9	175	26,297	6.3
Mc Lennan, TX	98,076	1.0	241	27,034	2.1
Montgomery, TX	76,865	5.0	21	32,119	9.7
Nueces, TX	142,309	.8	250	28,187	4.7
Potter, TX	75,572	.7	254	26,552	2.8
Smith, TX	83,353	2.8	102	29,509	3.6
Tarrant, TX	703,025	3.5	56	35,438	5.0
Travis, TX	538,193	5.1	17	41,332	7.0
Williamson, TX	76,588	9.5	2	50,415	-4.5
Davis, UT	84,640	3.2	76	27,711	7.2
Salt Lake, UT	531,240	2.6	116	32,192	5.0
Utah, UT	142,369	4.5	24	27,891	5.0
Weber, UT	86,404	.4	280	26,644	2.5
Chittenden, VT	95,343	5.1	18	34,288	4.2
Arlington, VA	157,906	4.1	37	52,846	7.1
Chesterfield, VA	107,932	2.1	161	31,880	3.5
Fairfax, VA	537,647	6.7	7	51,576	10.3
Henrico, VA	165,617	2.4	134	36,138	5.8
Loudoun, VA	87,265	11.9	1	54,141	3.6
Prince William, VA	78,209	4.3	28	28,986	5.5
Alexandria, VA	91,818	5.1	19	42,101	6.1
Chesapeake, VA	81,294	2.1	162	26,069	4.2
Newport News, VA	93,607	1.8	185	30,261	5.4
Norfolk, VA	145,197	.3	284	32,179	4.9

See footnotes at end of table.

21. Continued—Annual data: Employment and average annual pay for all workers covered under UI and UCFE in the 316 largest U.S. counties

County[1]	Employment			Average annual pay	
	2000	Percent change, 1999-2000[2]	Ranked by percent change, 1999-2000[3]	2000	Percent change, 1999-2000[2]
Richmond, VA	166,923	1.4	213	38,635	5.1
Roanoke City, VA	75,894	3.0	90	29,487	4.6
Virginia Beach, VA	165,610	3.6	53	25,414	4.4
Clark, WA	113,910	1.5	206	32,163	6.0
King, WA	1,162,290	2.7	106	47,459	3.0
Pierce, WA	241,654	4.2	31	29,854	4.2
Snohomish, WA	209,557	-1.2	310	35,091	3.6
Spokane, WA	188,843	2.9	94	29,760	7.9
Thurston, WA	84,277	1.6	200	31,745	6.9
Yakima, WA	94,233	1.9	176	23,237	3.7
Kanawha, WV	112,920	.7	255	30,156	3.1
Brown, WI	142,359	2.1	163	31,538	2.9
Dane, WI	274,353	2.6	117	32,817	5.5
Milwaukee, WI	528,837	.5	271	34,744	3.1
Outagamie, WI	94,364	2.9	95	30,769	4.4
Racine, WI	79,160	-.9	305	32,536	-.6
Waukesha, WI	222,877	1.2	227	35,767	5.2
Winnebago, WI	90,256	2.2	152	33,622	2.7
San Juan, PR	327,187	3.8	42	21,312	3.5

[1] Includes areas not officially designated as counties.   See Notes on Current Labor Statistics.

[2] Percent changes were computed from annual employment and pay data adjusted for noneconomic county reclassifications. See Notes on Current Labor Statistics.

[3] Rankings for percent change in employment are based on the 314 counties that are comparable over the year.

[4] Totals for the United States do not include data for Puerto Rico.

[5] Data are not available for release.

Note: Data pertain to workers covered by Unemployment Insurance (UI) and Unemployment Compensation for Federal Employees (UCFE) programs. The 315 U.S. counties comprise 70.8 percent of the total covered workers in the United States

22. Annual data: Employment status of the population

[Numbers in thousands]

Employment status	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Civilian noninstitutional population...........	192,805	194,838	196,814	198,584	200,591	203,133	205,220	207,753	209,699	211,864
Civilian labor force...............................	128,105	129,200	131,056	132,304	133,943	136,297	137,673	139,368	140,863	141,815
Labor force participation rate..............	66.4	66.3	66.6	66.6	66.8	67.1	67.1	67.1	67.2	66.9
Employed......................................	118,492	120,259	123,060	124,900	126,708	129,558	131,463	133,488	135,208	135,073
Employment-population ratio..........	61.5	61.7	62.5	62.9	63.2	63.8	64.1	64.3	64.5	63.8
Agriculture..................................	3,247	3,115	3,409	3,440	3,443	3,399	3,378	3,281	3,305	3,144
Nonagricultural industries.............	115,245	117,144	119,651	121,460	123,264	126,159	128,085	130,207	131,903	131,929
Unemployed....................................	9,613	8,940	7,996	7,404	7,236	6,739	6,210	5,880	5,655	6,742
Unemployment rate........................	7.5	6.9	6.1	5.6	5.4	4.9	4.5	4.2	4.0	4.8
Not in the labor force............................	64,700	65,638	65,758	66,280	66,647	66,837	67,547	68,385	68,836	70,050

23. Annual data: Employment levels by industry

[In thousands]

Industry	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total employment....................	108,601	110,713	114,163	117,191	119,608	122,690	125,865	128,916	131,759	132,213
Private sector........................	89,956	91,872	95,036	97,885	100,189	103,133	106,042	108,709	111,079	111,341
Goods-producing...................	23,231	23,352	23,908	24,265	24,493	24,962	25,414	25,507	25,709	25,122
Mining..............	635	610	601	581	580	596	590	539	543	563
Construction....................	4,492	4,668	4,986	5,160	5,418	5,691	6,020	6,415	6,698	6,861
Manufacturing.................	18,104	18,075	18,321	18,524	18,495	18,675	18,805	18,552	18,469	17,698
Service-producing................	85,370	87,361	90,256	92,925	95,115	97,727	100,451	103,409	106,050	107,092
Transportation and public utilities.......	5,718	5,811	5,984	6,132	6,253	6,408	6,611	6,834	7,019	7,070
Wholesale trade................	5,997	5,981	6,162	6,378	6,482	6,648	6,800	6,911	7,024	7,014
Retail trade..................	19,356	19,773	20,507	21,187	21,597	21,966	22,295	22,848	23,307	23,488
Finance, insurance, and real estate....	6,602	6,757	6,896	6,806	6,911	7,109	7,389	7,555	7,560	7,624
Services.................	29,052	30,197	31,579	33,117	34,454	36,040	37,533	39,055	40,460	41,024
Government..................	18,645	18,841	19,128	19,305	19,419	19,557	19,823	20,206	20,681	20,873
Federal..................	2,969	2,915	2,870	2,822	2,757	2,699	2,686	2,669	2,777	2,616
State.................	4,408	4,488	4,576	4,635	4,606	4,582	4,612	4,709	4,785	4,880
Local..........	11,267	11,438	11,682	11,849	12,056	12,276	12,525	12,829	13,119	13,377

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

24. Annual data: Average hours and earnings of production or nonsupervisory workers on nonfarm payrolls, by industry

Industry	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Private sector:										
Average weekly hours...............................	34.4	34.5	34.7	34.5	34.4	34.6	34.6	34.5	34.5	34.2
Average hourly earnings (in dollars)......................	10.57	10.83	11.12	11.43	11.82	12.28	12.78	13.24	13.75	14.33
Average weekly earnings (in dollars)......................	363.61	373.64	385.86	394.34	406.61	424.89	442.19	456.78	474.38	490.09
Mining:										
Average weekly hours................	43.9	44.3	44.8	44.7	45.3	45.4	43.9	43.2	43.1	43.4
Average hourly earnings (in dollars)...........	14.54	14.60	14.88	15.30	15.62	16.15	16.91	17.05	17.24	17.65
Average weekly earnings (in dollars).......................	638.31	646.78	666.62	683.91	707.59	733.21	742.35	736.56	743.04	766.01
Construction:										
Average weekly hours..............	38.0	38.5	38.9	38.9	39.0	39.0	38.9	39.1	39.3	39.2
Average hourly earnings (in dollars)............	14.15	14.38	14.73	15.09	15.47	16.04	16.61	17.19	17.88	18.33
Average weekly earnings (in dollars)......................	537.70	553.63	573.00	587.00	603.33	625.56	646.13	672.13	702.68	718.54
Manufacturing:										
Average weekly hours..............	41.0	41.4	42.0	41.6	41.6	42.0	41.7	41.7	41.6	40.7
Average hourly earnings (in dollars)............	11.46	11.74	12.07	12.37	12.77	13.17	13.49	13.90	14.38	14.84
Average weekly earnings (in dollars)......................	469.86	486.04	506.94	514.59	531.23	553.14	562.53	579.63	598.21	603.99
Transportation and public utilities:										
Average weekly hours..............	38.3	39.3	39.7	39.4	39.6	39.7	39.5	38.7	38.6	38.1
Average hourly earnings (in dollars)...........	13.43	13.55	13.78	14.13	14.45	14.92	15.31	15.69	16.22	16.89
Average weekly earnings (in dollars)......................	514.37	532.52	547.07	556.72	572.22	592.32	604.75	607.20	626.09	643.51
Wholesale trade:										
Average weekly hours..............	38.2	38.2	38.4	38.3	38.3	38.4	38.3	38.3	38.5	38.2
Average hourly earnings (in dollars)...........	11.39	11.74	12.06	12.43	12.87	13.45	14.07	14.58	15.20	15.80
Average weekly earnings (in dollars)......................	435.10	448.47	463.10	476.07	492.92	516.48	538.88	558.80	585.20	603.56
Retail trade:										
Average weekly hours..............	28.8	28.8	28.9	28.8	28.8	28.9	29.0	29.0	28.9	28.8
Average hourly earnings (in dollars)...........	7.12	7.29	7.49	7.69	7.99	8.33	8.74	9.09	9.46	9.82
Average weekly earnings (in dollars)......................	205.06	209.95	216.46	221.47	230.11	240.74	253.46	263.61	273.39	282.82
Finance, insurance, and real estate:										
Average weekly hours..............	35.8	35.8	35.8	35.9	35.9	36.1	36.4	36.2	36.3	36.3
Average hourly earnings (in dollars)...........	10.82	11.35	11.83	12.32	12.80	13.34	14.07	14.62	15.07	15.83
Average weekly earnings (in dollars)......................	387.36	406.33	423.51	442.29	459.52	481.57	512.15	529.24	547.04	574.63
Services:										
Average weekly hours..............	32.5	32.5	32.5	32.4	32.4	32.6	32.6	32.6	32.7	32.7
Average hourly earnings (in dollars)...........	10.54	10.78	11.04	11.39	11.79	12.28	12.84	13.37	13.91	14.61
Average weekly earnings (in dollars)......................	342.55	350.35	358.80	369.04	382.00	400.33	418.58	435.86	454.86	477.75

25. Employment Cost Index, compensation,[1] by occupation and industry group

[June 1989 = 100]

Series	2000				2001				2002	Percent change	
										3 months ended	12 months ended
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	Mar. 2002	
Civilian workers[2]	146.5	148.0	149.5	150.6	152.5	153.8	155.6	156.8	158.4	1.0	3.9
Workers, by occupational group:											
White-collar workers	148.4	149.9	151.5	152.5	154.4	156.0	157.7	158.9	160.5	1.0	4.0
Professional specialty and technical	146.7	148.3	150.0	151.3	153.2	154.3	156.7	157.5	158.5	.6	3.5
Executive, adminitrative, and managerial	150.5	151.9	153.7	154.6	156.6	158.6	159.6	161.2	163.7	1.6	4.5
Administrative support, including clerical	148.6	150.1	151.8	152.8	155.3	156.8	158.8	160.0	162.0	1.3	4.3
Blue-collar workers	142.7	144.1	145.6	146.5	148.2	149.3	151.1	152.0	153.7	1.1	3.7
Service occupations	146.0	147.1	148.5	150.0	152.0	153.3	155.0	156.9	158.4	1.0	4.2
Workers, by industry division:											
Goods-producing	144.9	146.6	148.0	148.8	150.7	152.2	153.3	154.4	156.3	1.2	3.7
Manufacturing	146.0	147.5	148.7	149.3	151.3	152.6	153.3	154.6	156.6	1.3	3.5
Service-producing	147.1	148.4	150.1	151.1	153.0	155.4	156.4	157.6	159.1	1.0	4.0
Services	148.0	149.3	151.2	152.4	154.3	155.4	158.1	159.0	160.2	.8	3.8
Health services	145.9	147.5	149.0	150.7	152.5	154.6	156.7	158.3	160.5	1.4	5.2
Hospitals	146.3	147.7	149.5	151.3	153.2	155.6	158.2	160.0	162.3	1.4	5.9
Educational services	146.5	146.8	149.7	150.6	151.7	152.2	156.1	156.6	157.1	.3	3.6
Public administration[3]	145.7	146.1	146.9	148.3	150.6	151.9	153.8	155.2	156.5	.8	3.9
Nonmanufacturing	146.6	148.0	149.6	150.7	152.6	154.0	156.0	157.2	158.7	1.0	4.0
Private industry workers	146.8	148.5	149.9	150.9	153.0	154.5	155.9	157.2	158.9	1.1	3.9
Excluding sales occupations	146.5	148.2	149.8	150.9	153.0	154.4	156.0	160.9	159.0	1.1	3.9
Workers, by occupational group:											
White-collar workers	149.3	151.1	152.6	153.6	155.7	157.4	158.7	160.1	161.9	1.1	4.0
Excluding sales occupations	149.4	151.3	152.9	154.1	156.5	158.1	159.6	160.9	162.8	1.2	4.0
Professional specialty and technical occupations	148.4	150.7	152.2	153.7	156.3	157.5	159.2	160.3	161.5	.7	3.3
Executive, adminitrative, and managerial occupations	151.1	152.7	154.4	155.3	157.3	159.4	160.2	161.8	164.4	1.6	4.5
Sales occupations	148.9	150.3	151.2	151.4	152.3	154.5	155.0	156.7	157.7	.6	3.5
Administrative support occupations, including clerical	149.0	150.6	152.3	153.4	156.1	157.7	159.5	160.8	162.8	1.2	4.3
Blue-collar workers	142.6	144.1	145.5	146.4	148.2	149.3	151.0	151.9	153.6	1.1	3.6
Precision production, craft, and repair occupations	142.3	144.1	145.8	146.7	148.7	149.7	151.8	152.5	153.7	.8	3.4
Machine operators, assemblers, and inspectors	144.0	145.0	146.0	146.8	148.3	149.1	150.4	151.5	153.6	1.4	3.6
Transportation and material moving occupations	137.5	138.6	139.9	141.1	142.6	143.9	145.6	146.3	148.7	1.6	4.3
Handlers, equipment cleaners, helpers, and laborers	146.4	148.1	149.4	150.4	152.2	153.4	154.9	156.5	158.7	1.4	4.3
Service occupations	143.9	145.4	146.6	148.1	150.0	151.3	152.6	154.8	156.4	1.0	4.3
Production and nonsupervisory occupations[4]	145.3	146.9	148.4	149.5	151.4	152.7	154.3	155.5	157.1	1.0	3.8
Workers, by industry division:											
Goods-producing	144.8	146.6	147.9	148.8	150.7	152.1	153.1	154.4	156.2	1.2	3.6
Excluding sales occupations	144.2	145.9	147.2	148.2	150.1	151.5	152.5	153.7	155.5	1.2	3.6
White-collar occupations	148.1	150.1	151.3	151.9	154.5	156.5	156.8	158.1	160.1	1.3	3.6
Excluding sales occupations	146.5	148.4	149.6	150.5	153.0	155.0	155.3	156.5	158.4	1.2	3.5
Blue-collar occupations	142.8	144.4	145.8	146.8	148.2	149.3	150.8	151.9	153.6	1.1	3.6
Construction	140.8	143.2	145.1	146.7	148.2	150.3	151.7	153.0	154.1	.7	4.0
Manufacturing	146.0	147.5	148.7	149.3	151.3	152.6	152.2	154.6	156.6	1.3	3.5
White-collar occupations	148.2	150.2	151.4	151.5	154.2	156.0	156.0	156.9	159.1	1.4	3.2
Excluding sales occupations	146.2	148.2	149.3	149.7	152.2	154.0	153.8	154.5	156.7	1.3	3.0
Blue-collar occupations	144.4	145.6	146.7	147.8	149.1	150.0	151.3	152.7	154.6	1.2	3.7
Durables	146.5	148.3	149.4	150.1	151.8	153.1	154.0	155.3	156.9	1.0	3.4
Nondurables	144.9	146.0	147.5	147.7	150.4	151.6	152.0	153.2	156.0	1.8	3.7
Service-producing	147.4	149.1	150.6	151.7	153.8	155.3	156.9	158.2	159.9	1.1	4.0
Excluding sales occupations	147.7	149.4	151.1	152.2	154.6	156.0	157.8	159.0	160.9	1.2	4.1
White-collar occupations	149.3	151.0	152.6	153.7	155.8	157.4	159.0	160.3	162.1	1.1	4.0
Excluding sales occupations	150.3	152.1	153.9	155.1	157.5	159.1	160.9	162.2	164.1	1.2	4.2
Blue-collar occupations	141.8	143.1	144.5	145.3	147.7	148.7	150.9	151.0	153.2	1.2	3.7
Service occupations	143.6	145.1	146.3	147.9	149.6	150.8	152.2	154.2	155.9	1.1	4.2
Transportation and public utilities	143.9	145.7	147.4	148.3	150.5	152.4	153.5	155.5	157.3	1.2	4.5
Transportation	140.4	141.8	142.8	143.9	145.4	146.9	148.2	151.1	152.5	.9	4.9
Public utilities	148.6	150.9	153.5	154.1	157.3	159.8	160.7	161.5	163.9	1.5	4.2
Communications	148.4	150.9	153.9	154.7	158.3	161.1	162.8	163.4	166.0	1.6	4.9
Electric, gas, and sanitary services	148.9	151.0	152.9	153.4	156.0	158.1	158.1	159.1	161.3	1.4	3.4
Wholesale and retail trade	145.6	147.3	148.3	149.4	151.0	152.6	153.7	155.5	156.5	.6	3.6
Excluding sales occupations	146.4	148.1	149.6	150.6	152.6	153.9	155.4	–	–	–	–
Wholesale trade	150.0	151.8	152.1	154.4	155.1	157.8	158.6	159.5	161.9	1.5	4.4
Excluding sales occupations	149.6	151.1	152.7	154.9	156.9	158.5	160.0	160.6	162.3	1.1	3.4
Retail trade	143.2	144.8	146.2	146.6	148.7	149.7	150.9	153.2	153.5	.2	3.2
General merchandise stores	139.7	141.0	142.2	144.4	147.3	149.4	149.7	150.9	152.4	1.0	3.5
Food stores	140.1	142.5	143.4	144.5	146.1	148.2	149.7	151.7	152.9	.8	4.7

See footnotes at end of table.

25. Continued—Employment Cost Index, compensation,[1] by occupation and industry group

[June 1989 = 100]

Series	2000				2001				2002	Percent change	
										3 months ended	12 months ended
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	Mar. 2002	Mar. 2002
Finance, insurance, and real estate............................	152.0	153.1	155.2	155.7	157.9	159.5	160.9	161,3	165.2	2.4	4.6
Excluding sales occupations.......................................	154.2	155.5	157.4	158.4	161.2	163.1	164.7	165.0	169.8	2.9	5.3
Banking, savings and loan, and other credit agencies.	162.7	164.2	165.8	166.5	170.8	172.7	175.4	174.5	182.1	4.5	6.6
Insurance..	149.9	151.2	154.8	155.2	157.6	159.3	159.9	161.3	164.0	1.7	4.1
Services..	149.4	151.2	152.9	154.1	156.5	157.8	160.0	161.0	162.6	1.0	3.9
Business services...	154.2	156.3	157.5	158.4	160.5	163.0	165.2	166.2	166.3	.1	3.6
Health services...	145.8	147.5	149.0	150.6	152.7	154.7	156.8	158.4	160.6	1.4	5.2
Hospitals..	145.8	147.5	149.2	151.1	153.5	155.9	158.4	160.3	162.8	1.6	6.1
Educational services..	154.0	154.9	158.8	159.9	162.3	162.6	166.4	167.6	168.5	.5	3.8
Colleges and universities..	154.6	155.5	158.6	159.2	162.2	162.6	166.2	167.5	168.1	.4	3.6
Nonmanufacturing..	146.7	148.4	150.0	151.1	153.1	154.7	156.3	157.6	159.3	1.1	4.0
White-collar workers...	149.2	151.0	152.6	153.7	155.8	157.5	159.0	160.5	162.2	1.1	4.1
Excluding sales occupations...	150.2	152.0	153.8	155.1	157.5	159.1	160.9	162.3	164.2	1.2	4.3
Blue-collar occupations..	140.6	142.3	143.9	144.8	146.9	148.1	150.2	150.6	152.2	1.1	3.6
Service occupations...	143.5	145.1	146.3	147.8	149.5	150.7	152.1	154.1	155.9	1.2	4.3
State and local government workers................................	145.5	145.9	147.8	148.9	150.3	151.2	154.3	155.2	156.1	.6	3.9
Workers, by occupational group:											
White-collar workers...	144.9	145.3	147.3	148.3	149.5	150.4	153.7	154.4	155.2	.5	3.8
Professional specialty and technical..............................	144.1	144.5	146.6	147.4	148.4	149.2	152.8	153.2	153.6	.3	3.5
Executive, administrative, and managerial.....................	147.0	147.2	149.2	150.7	152.4	153.7	156.4	157.6	159.5	1.2	4.7
Administrative support, including clerical......................	145.9	146.5	148.3	149.4	150.7	151.6	154.2	155.6	156.9	.8	4.1
Blue-collar workers...	143.7	144.2	145.9	147.2	148.6	149.0	151.5	153.2	154.0	.5	3.6
Workers, by industry division:											
Services...	145.2	145.5	148.0	148.9	149.9	150.6	154.4	154.9	155.5	.4	3.7
Services excluding schools[5]...	145.2	145.8	147.6	148.8	150.1	151.9	154.5	156.1	157.9	1.2	5.2
Health services...	147.3	147.9	150.0	151.6	152.1	154.4	157.1	158.5	160.4	1.1	5.5
Hospitals..	147.9	148.4	150.7	152.0	152.2	154.7	157.4	159.1	160.7	1.0	5.6
Educational services..	145.0	145.2	147.9	148.7	149.6	150.1	154.1	154.5	154.8	.2	3.5
Schools...	145.3	145.5	148.2	149.0	149.9	150.5	154.4	154.8	155.1	.2	3.5
Elementary and secondary......................................	144.5	144.7	147.3	148.1	148.5	149.0	152.8	153.1	153.4	.2	3.3
Colleges and universities..	147.4	147.6	150.5	151.7	153.7	154.3	153.8	159.6	160.0	.3	4.1
Public administration[3]..	145.7	146.1	146.9	148.3	150.6	151.9	151.9	155.2	156.5	.8	3.9

[1] Cost (cents per hour worked) measured in the Employment Cost Index consists of wages, salaries, and employer cost of employee benefits.

[2] Consists of private industry workers (excluding farm and household workers) and State and local government (excluding Federal Government) workers.

[3] Consists of legislative, judicial, administrative, and regulatory activities.

[4] This series has the same industry and occupational coverage as the Hourly Earnings index, which was discontinued in January 1989.

[5] Includes, for example, library, social, and health services.

26. Employment Cost Index, wages and salaries, by occupation and industry group

[June 1989 = 100]

Series	2000				2001				2002	Percent change	
										3 months ended	12 months ended
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	Mar. 2002	Mar. 2002
Civilian workers[1]	144.0	145.4	147.0	147.9	149.5	150.8	152.3	153.4	154.8	0.9	3.5
Workers, by occupational group:											
White-collar workers	146.2	147.6	149.2	150.2	151.7	153.1	154.5	155.6	157.0	.9	3.5
Professional specialty and technical	144.9	146.4	148.3	149.6	151.1	152.-	154.2	155.1	155.6	.3	3.0
Executive, adminitrative, and managerial	148.6	149.9	151.6	152.4	154.0	155.8	156.7	158.1	160.7	1.6	4.4
Administrative support, including clerical	145.5	146.9	148.5	149.6	151.6	152.7	154.6	155.7	157.3	1.0	3.8
Blue-collar workers	139.2	140.6	142.0	142.9	144.7	146.0	147.6	148.5	149.7	.8	3.5
Service occupations	143.0	144.0	145.7	147.1	148.6	149.7	151.2	153.0	154.2	.8	3.8
Workers, by industry division:											
Goods-producing	141.3	143.0	144.3	145.3	147.0	147,6	149.5	150.5	151.8	.9	3.3
Manufacturing	142.9	144.4	145.7	146.5	148.5	150.0	150.7	151.7	153.1	.9	3.1
Service-producing	145.0	146.3	148.0	148.9	150.5	151.7	153.4	154.5	155.9	.9	3.6
Services	146.6	147.9	149.9	151.0	152.6	153.6	156.2	157.1	158.1	.6	3.6
Health services	143.8	145.3	146.7	148.3	149.8	151.8	153.7	155.5	157.3	1.2	5.0
Hospitals	142.6	143.8	145.6	147.3	148.8	151.2	15.5	155.5	157.2	1.1	5.6
Educational services	145.3	145.6	148.9	149.6	150.5	151.0	154.6	155.1	155.3	.1	3.2
Public administration[2]	142.5	142.9	144.6	146.1	147.6	148.7	150.3	151.6	152.5	.6	3.3
Nonmanufacturing	144.2	145.5	147.2	148.1	149.7	149.7	152.6	153.8	155.0	.8	3.5
Private industry workers	143.9	145.4	146.8	147.7	149.4	150.9	152.1	153.3	154.7	.9	3.5
Excluding sales occupations	143.5	145.1	146.5	147.6	149.5	150.8	152.2	153.3	154.9	1.0	3.6
Workers, by occupational group:											
White-collar workers	146.6	148.3	149.7	150.6	152.3	153.8	154.8	156.1	157.7	1.0	3.5
Excluding sales occupations	146.7	148.5	149.9	151.1	153.0	154.4	155.7	156.9	158.6	1.1	3.7
Professional specialty and technical occupations	145.1	147.3	148.6	150.2	152.1	153.2	154.8	155.9	156.7	.5	3.0
Executive, adminitrative, and managerial occupations	149.2	150.7	152.3	153.0	154.7	156.5	157.2	158.6	161.3	1.7	4.3
Sales occupations	146.7	147.9	149.0	148.7	149.2	151.5	151.2	152.6	153.6	.7	2.9
Administrative support occupations, including clerical	146.0	147.5	149.1	150.1	152.3	153.6	155.3	156.5	158.2	1.1	3.9
Blue-collar workers	139.1	140.5	141.9	142.8	144.6	145.9	147.5	148.3	149.6	.9	3.5
Precision production, craft, and repair occupations	138.9	140.6	142.0	142.8	144.6	145.7	147.7	148,4	149.2	.5	3.2
Machine operators, assemblers, and inspectors	140.7	141.6	142.9	143.7	145.6	146.9	148.1	149.0	150.5	1.0	3.4
Transportation and material moving occupations	134.1	135.2	136.5	137.6	139.5	140.7	142.1	142.8	144.8	1.4	3.8
Handlers, equipment cleaners, helpers, and laborers	141.8	143.6	145.0	146.2	148.0	149.8	151.0	152.4	154.2	1.2	4.2
Service occupations	141.0	142.5	143.5	144.9	146.4	147.5	148.7	150.6	152.0	.9	3.8
Production and nonsupervisory occupations[3]	142.1	143.7	145.0	146.0	147.7	149.0	150.3	151.5	152.7	.8	3.4
Workers, by industry division:											
Goods-producing	141.3	143.0	144.3	145.2	147.0	148.6	149.5	150.5	151.7	.8	3.2
Excluding sales occupations	140.5	142.1	143.4	144.6	146.3	147.8	148.7	149.7	150.9	.8	3.1
White-collar occupations	145.0	146.8	147.9	148.7	150.5	152.3	152.6	153.6	155.0	.9	3.0
Excluding sales occupations	143.2	144.9	146.0	147.2	148.9	150.5	150.8	151.7	152.9	.8	2.7
Blue-collar occupations	139.0	140.5	142.0	143.1	144.7	146.1	147.4	148.4	149.6	.8	3.4
Construction	136.0	138.0	139.4	140.7	142.1	143.9	145.1	146.3	147.0	.5	3.4
Manufacturing	142.9	144.4	145.7	146.5	148.5	150.0	150.7	151.7	153.1	.9	3.1
White-collar occupations	145.8	147.7	148.7	149.2	151.1	152.7	152.8	153.3	154.9	1.0	2.5
Excluding sales occupations	143.7	145.6	146.6	147.5	149.9	150.5	150.5	151.0	152.3	.9	2.1
Blue-collar occupations	140.8	142.0	143.4	144.6	146.4	147.8	149.1	150.3	151.7	.9	3.6
Durables	143.0	144.7	146.1	147.3	149.0	150.5	151.5	151.7	153.9	.9	3.3
Nondurables	142.7	143.9	145.0	145.4	147.5	149.0	149.3	153.9	151.9	1.1	3.0
Service-producing	145.0	146.5	147.9	148.9	150.5	151.9	153.2	151.9	156.1	1.0	3.7
Excluding sales occupations	145.3	146.9	148.3	149.4	151.3	152.6	154.2	156.1	157.2	1.1	3.9
White-collar occupations	146.9	148.5	150.0	150.9	152.5	154.0	155.2	157.2	158.2	1.1	3.7
Excluding sales occupations	147.8	149.6	151.2	152.3	154.3	155.6	157.2	158.2	160.4	1.1	4.0
Blue-collar occupations	139.1	140.3	141.6	142.2	144.3	145.3	147.5	148.1	149.4	.9	3.5
Service occupations	141.1	142.5	143.5	144.8	146.1	147.2	148.4	149.4	151.6	.9	3.8
Transportation and public utilities	138.5	140.0	141.3	142.3	143.7	145.7	146.7	149.2	150.5	.9	4.7
Transportation	134.9	136.2	137.4	138.6	139.8	141.6	142.6	144.7	147.4	1.2	5.4
Public utilities	143.2	144.9	146.4	147.1	148.7	151.0	152.0	153.6	154.3	.5	3.8
Communications	143.4	145.0	146.7	147.4	149.2	151.8	153.3	155.2	155.3	.1	4.1
Electric, gas, and sanitary services	143.0	144.7	145.9	146.6	148.1	149.9	150.4	151.7	153.0	.9	3.3
Wholesale and retail trade	143.8	145.5	146.4	147.4	148.4	150.1	150.6	152.1	153.0	.6	3.1
Excluding sales occupations	145.2	146.8	148.2	149.0	150.7	151.9	153.1	–	–	–	–
Wholesale trade	147.4	149.4	149.6	151.6	151.6	154.5	154.1	154.8	157.2	1.6	3.7
Excluding sales occupations	147.9	149.7	151.3	153.2	154.9	156.5	157.4	157.9	159.4	.9	2.9
Retail trade	142.1	143.5	144.8	145.2	146.9	147.8	148.8	150.7	150.9	.1	2.7
General merchandise stores	137.8	138.5	139.7	142.2	143.8	145.5	145.7	146.5	147.9	1.0	2.9
Food stores	136.7	139.5	140.2	141.6	143.3	144.5	145.7	146.7	148.0	.9	3.3

See footnotes at end of table.

26. Continued—Employment Cost Index, wages and salaries, by occupation and industry group

[June 1989 = 100]

Series	2000				2001				2002	Percent change	
										3 months ended	12 months ended
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	Mar. 2002	
Finance, insurance, and real estate	148.7	149.5	151.7	151.7	153.9	154.6	155.8	156.0	160.3	2.8	4.2
Excluding sales occupations	150.2	151.5	153.3	154.1	156.6	157.6	159.1	159.1	164.5	3.4	5.0
Banking, savings and loan, and other credit agencies	162.0	163.3	165.0	165.7	169.4	170.8	173.2	171.7	181.2	5.5	7.0
Insurance	145.5	146.6	150.7	150.8	152.4	153.3	153.6	155.0	157.1	1.4	3.1
Services	147.4	149.1	150.6	151.8	153.8	155.0	157.1	158.2	159.5	.8	3.7
Business services	152.0	154.1	155.3	156.0	158.2	160.8	162.8	163.7	164.0	.2	3.7
Health services	143.5	145.3	146.6	148.1	149.8	151.8	153.6	155.4	157.3	1.2	5.0
Hospitals	141.8	143.3	144.9	146.8	148.5	151.0	153.3	155.4	157.1	1.1	5.8
Educational services	148.9	149.6	153.4	154.3	155.4	156.1	159.6	160.5	161.2	.4	3.7
Colleges and universities	148.9	149.4	152.5	152.9	154.1	155.0	158.4	159.6	159.9	.2	3.8
Nonmanufacturing	143.9	145.5	146.9	147.9	149.5	150.9	152.2	153.5	155.0	1.0	3.7
White-collar workers	146.5	148.2	149.6	150.6	152.3	153.8	155.0	156.4	158.0	1.0	3.7
Excluding sales occupations	147.4	149.1	150.7	151.9	153.3	155.3	156.9	158.3	160.1	1.1	4.0
Blue-collar occupations	137.4	138.9	140.3	140.9	142.8	143.9	145.8	146.4	147.5	.8	3.3
Service occupations	140.9	142.4	143.4	144.7	146.0	147.1	148.2	150.1	151.4	.9	3.7
State and local government workers	144.3	144.7	147.2	148.3	150.2	151.2	154.3	155.2	156.1	.5	3.4
Workers, by occupational group:											
White-collar workers	144.1	144.5	147.1	148.0	149.0	149.8	152.7	153.3	153.9	.4	3.3
Professional specialty and technical	144.3	144.7	147.4	148.2	149.1	149.8	153.0	153.4	153.6	.1	3.0
Executive, administrative, and managerial	144.9	145.1	147.3	148.8	150.1	151.5	153.9	155.1	156.6	1.0	4.3
Administrative support, including clerical	142.4	143.0	145.0	146.2	147.0	147.6	149.8	150.9	151.9	.7	3.3
Blue-collar workers	141.5	142.1	143.9	145.1	146.0	146.5	149.1	150.8	151.6	.5	3.8
Workers, by industry division:											
Services	144.6	144.9	147.9	148.7	149.5	150.2	153.7	154.2	154.6	.3	3.4
Services excluding schools[4]	144.3	144.8	146.7	147.9	149.1	150.7	153.2	154.9	156.7	1.2	5.1
Health services	145.3	145.7	147.7	149.3	149.9	151.9	154.2	155.8	157.8	1.3	5.3
Hospitals	145.3	145.6	147.7	149.2	149.5	151.8	154.2	155.7	157.7	1.3	5.5
Educational services	144.5	144.8	148.0	148.7	149.5	150.0	153.6	154.0	154.2	.1	3.1
Schools	144.7	144.9	148.1	148.9	149.7	150.2	153.8	154.1	154.3	.1	3.1
Elementary and secondary	144.5	144.6	147.9	148.5	149.0	149.5	152.8	153.1	153.4	.2	3.0
Colleges and universities	144.9	145.6	148.3	149.5	151.4	151.8	156.5	156.7	156.8	.1	3.6
Public administration[2]	142.5	142.9	144.6	146.1	147.6	148.7	150.3	151.6	152.5	.6	3.3

[1] Consists of private industry workers (excluding farm and household workers) and State and local government (excluding Federal Government) workers.

[2] Consists of legislative, judicial, administrative, and regulatory activities.

[3] This series has the same industry and occupational coverage as the Hourly Earnings index, which was discontinued in January 1989.

[4] Includes, for example, library, social, and health services.

27. Employment Cost Index, benefits, private industry workers by occupation and industry group

[June 1989 = 100]

Series	2000				2001				2002	Percent change	
										3 months ended	12 months ended
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	Mar. 2002	
Private industry workers	153.8	155.7	157.5	158.6	161.5	163.2	165.2	166.7	169.3	1.6	4.8
Workers, by occupational group:											
White-collar workers	156.3	158.5	160.4	161.5	165.2	167.4	169.5	171.2	173.5	1.3	5.0
Blue-collar workers	150.0	151.6	153.1	154.1	155.7	156.7	158.3	159.2	162.2	1.9	4.2
Workers, by industry division:											
Goods-producing	152.3	154.2	155.7	156.2	158.5	159.6	160.8	162.6	165.8	2.0	4.6
Service-producing	154.0	156.0	157.9	159.4	162.6	164.6	167.1	168.4	170.7	1.4	5.0
Manufacturing	152.3	153.9	154.9	154.8	157.1	157.9	158.5	160.4	163.7	2.1	4.2
Nonmanufacturing	154.0	156.1	158.1	159.7	162.9	164.9	167.4	168.6	171.1	1.4	5.0

28. Employment Cost Index, private nonfarm workers by bargaining status, region, and area size

[June 1989 = 100]

Series	2000				2001				2002	Percent change	
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	3 months ended	12 months ended
										Mar. 2002	
COMPENSATION											
Workers, by bargaining status[1]											
Union...	143.0	144.4	146.1	146.9	147.9	149.5	151.0	153.1	154.8	1.1	4.7
Goods-producing..................................	143.3	144.8	146.8	147.3	147.9	149.3	150.6	151.6	153.4	1.1	3.7
Service-producing................................	142.5	143.9	145.2	146.4	147.6	149.5	151.2	154.2	156.0	1.2	5.7
Manufacturing.....................................	144.5	145.4	147.1	147.4	147.9	148.8	149.9	151.4	153.4	1.3	3.7
Nonmanufacturing................................	141.7	143.4	145.0	146.2	147.3	149.4	151.1	153.5	155.0	1.0	5.2
Nonunion...	147.4	149.1	150.6	151.6	153.8	155.3	156.7	157.8	159.6	1.1	3.8
Goods-producing..................................	145.4	147.2	148.4	149.3	151.6	153.1	154.0	155.3	157.2	1.2	3.7
Service-producing................................	148.0	149.6	151.2	152.3	154.4	155.9	157.5	158.6	160.3	1.1	3.8
Manufacturing.....................................	146.5	148.2	149.2	149.9	152.4	153.7	154.4	155.5	157.6	1.4	3.4
Nonmanufacturing................................	147.4	149.1	150.7	151.8	153.9	155.4	157.0	158.2	159.9	1.1	3.9
Workers, by region[1]											
Northeast..	146.3	147.6	149.3	150.3	151.6	153.7	155.2	156.3	158.3	1.3	4.4
South...	145.0	146.7	147.6	148.6	151.1	152.3	153.5	154.6	156.2	1.0	3.4
Midwest (formerly North Central)...............	148.9	150.7	152.2	153.3	154.8	156.0	157.4	158.6	161.1	1.6	4.1
West..	147.0	148.8	150.8	151.8	154.3	156.0	157.6	159.4	160.4	.6	4.0
Workers, by area size[1]											
Metropolitan areas................................	146.9	148.6	150.1	151.0	153.1	154.6	156.0	157.4	159.1	1.1	3.9
Other areas..	146.0	147.7	148.8	150.3	152.1	153.7	154.8	155.6	157.5	1.2	3.6
WAGES AND SALARIES											
Workers, by bargaining status[1]											
Union...	137.2	138.5	140.0	141.2	142.1	143.7	145.1	147.4	148.4	.7	4.4
Goods-producing..................................	137.2	138.4	140.2	141.3	142.4	144.2	145.3	146.3	147.2	.6	3.4
Service-producing................................	137.6	138.9	140.1	141.5	142.2	143.7	145.4	148.9	150.0	.7	5.5
Manufacturing.....................................	138.8	139.7	141.4	142.6	143.9	145.5	146.7	148.0	149.0	.7	3.5
Nonmanufacturing................................	136.4	137.8	139.2	140.4	141.1	142.7	144.3	147.1	148.1	.7	5.0
Nonunion...	145.1	146.7	148.1	149.0	150.8	152.2	153.4	154.4	155.9	1.0	3.4
Goods-producing..................................	142.9	144.7	145.8	146.8	148.8	150.3	151.1	152.1	153.5	.9	3.2
Service-producing................................	145.8	147.3	148.7	149.6	151.4	152.7	154.1	155.1	156.7	1.0	3.5
Manufacturing.....................................	144.4	146.1	147.2	148.0	150.1	151.6	152.2	153.1	154.7	1.0	3.1
Nonmanufacturing................................	145.0	146.6	148.0	148.9	150.7	152.0	153.3	154.4	155.9	1.0	3.5
Workers, by region[1]											
Northeast..	142.3	143.7	145.3	146.0	147.3	149.2	150.6	151.7	153.5	1.2	4.2
South...	143.0	144.6	145.3	146.3	148.3	149.3	150.2	151.2	152.5	.9	2.8
Midwest (formerly North Central)...............	145.3	147.1	148.6	149.6	150.9	152.3	153.6	154.7	157.1	1.6	4.1
West..	144.7	146.3	148.2	149.2	151.3	152.9	154.3	156.0	156.4	.3	3.4
Workers, by area size[1]											
Metropolitan areas................................	144.1	145.7	147.1	148.0	149.8	151.2	152.4	153.7	155.1	.9	3.5
Other areas..	142.2	143.7	144.7	146.0	147.4	148.8	149.7	150.5	151.7	.8	2.9

[1] The indexes are calculated differently from those for the occupation and industry groups. For a detailed description of the index calculation, see the *Monthly Labor Review* Technical Note, "Estimation procedures for the Employment Cost Index," May 1982.

29. Percent of full-time employees participating in employer-provided benefit plans, and in selected features within plans, medium and large private establishments, selected years, 1980–97

Item	1980	1982	1984	1986	1988	1989	1991	1993	1995	1997
Scope of survey (in 000's)	21,352	21,043	21,013	21,303	31,059	32,428	31,163	28,728	33,374	38,409
Number of employees (in 000's):										
With medical care	20,711	20,412	20,383	20,238	27,953	29,834	25,865	23,519	25,546	29,340
With life insurance	20,498	20,201	20,172	20,451	28,574	30,482	29,293	26,175	29,078	33,495
With defined benefit plan	17,936	17,676	17,231	16,190	19,567	20,430	18,386	16,015	17,417	19,202
Time-off plans										
Participants with:										
Paid lunch time	10	9	9	10	11	10	8	9	–	–
Average minutes per day	–	25	26	27	29	26	30	29		
Paid rest time	75	76	73	72	72	71	67	68	–	–
Average minutes per day	–	25	26	26	26	26	28	26	–	–
Paid funeral leave	–	–	–	88	85	84	80	83	80	81
Average days per occurrence	–	–	–	3.2	3.2	3.3	3.3	3.0	3.3	3.7
Paid holidays	99	99	99	99	96	97	92	91	89	89
Average days per year	10.1	10.0	9.8	10.0	9.4	9.2	10.2	9.4	9.1	9.3
Paid personal leave	20	24	23	25	24	22	21	21	22	20
Average days per year	–	3.8	3.6	3.7	3.3	3.1	3.3	3.1	3.3	3.5
Paid vacations	100	99	99	100	98	97	96	97	96	95
Paid sick leave [1]	62	67	67	70	69	68	67	65	58	56
Unpaid maternity leave	–	–	–	–	33	37	37	60	–	–
Unpaid paternity leave	–	–	–	–	16	18	26	53	–	–
Unpaid family leave	–	–	–	–	–	–	–	–	84	93
Insurance plans										
Participants in medical care plans	97	97	97	95	90	92	83	82	77	76
Percent of participants with coverage for:										
Home health care	–	–	46	66	76	75	81	86	78	85
Extended care facilities	58	62	62	70	79	80	80	82	73	78
Physical exam	–	–	8	18	28	28	30	42	56	63
Percent of participants with employee contribution required for:										
Self coverage	26	27	36	43	44	47	51	61	67	69
Average monthly contribution	–	–	$11.93	$12.80	$19.29	$25.31	$26.60	$31.55	$33.92	$39.14
Family coverage	46	51	58	63	64	66	69	76	78	80
Average monthly contribution	–	–	$35.93	$41.40	$60.07	$72.10	$96.97	$107.42	$118.33	$130.07
Participants in life insurance plans	96	96	96	96	92	94	94	91	87	87
Percent of participants with:										
Accidental death and dismemberment insurance	69	72	74	72	78	71	71	76	77	74
Survivor income benefits	–	–	–	10	8	7	6	5	7	6
Retiree protection available	–	64	64	59	49	42	44	41	37	33
Participants in long-term disability insurance plans	40	43	47	48	42	45	40	41	42	43
Participants in sickness and accident insurance plans	54	51	51	49	46	43	45	44	–	–
Participants in short-term disability plans [1]	–	–	–	–	–	–	–	–	53	55
Retirement plans										
Participants in defined benefit pension plans	84	84	82	76	63	63	59	56	52	50
Percent of participants with:										
Normal retirement prior to age 65	55	58	63	64	59	62	55	52	52	52
Early retirement available	98	97	97	98	98	97	98	95	96	95
Ad hoc pension increase in last 5 years	–	–	47	35	26	22	7	6	4	10
Terminal earnings formula	53	52	54	57	55	64	56	61	58	56
Benefit coordinated with Social Security	45	45	56	62	62	63	54	48	51	49
Participants in defined contribution plans	–	–	–	60	45	48	48	49	55	57
Participants in plans with tax-deferred savings arrangements	–	–	–	33	36	41	44	43	54	55
Other benefits										
Employees eligible for:										
Flexible benefits plans	–	–	–	2	5	9	10	12	12	13
Reimbursement accounts [2]	–	–	–	5	12	23	36	52	38	32
Premium conversion plans	–	–	–	–	–	–	–	–	5	7

[1] The definitions for paid sick leave and short-term disability (previously sickness and accident insurance) were changed for the 1995 survey. Paid sick leave now includes only plans that specify either a maximum number of days per year or unlimited days. Short-terms disability now includes all insured, self-insured, and State-mandated plans available on a per-disability basis, as well as the unfunded per-disability plans previously reported as sick leave. Sickness and accident insurance, reported in years prior to this survey, included only insured, self-insured, and State-mandated plans providing per-disability benefits at less than full pay.

[2] Prior to 1995, reimbursement accounts included premium conversion plans, which specifically allow medical plan participants to pay required plan premiums with pretax dollars. Also, reimbursement accounts that were part of flexible benefit plans were tabulated separately.

NOTE: Dash indicates data not available.

30. Percent of full-time employees participating in employer-provided benefit plans, and in selected features within plans, small private establishments and State and local governments, 1987, 1990, 1992, 1994, and 1996

Item	Small private establishments				State and local governments			
	1990	1992	1994	1996	1987	1990	1992	1994
Scope of survey (in 000's).....................................	32,466	34,360	35,910	39,816	10,321	12,972	12,466	12,907
Number of employees (in 000's):								
With medical care...	22,402	24,396	23,536	25,599	9,599	12,064	11,219	11,192
With life insurance...	20,778	21,990	21,955	24,635	8,773	11,415	11,095	11,194
With defined benefit plan................................	6,493	7,559	5,480	5,883	9,599	11,675	10,845	11,708
Time-off plans								
Participants with:								
Paid lunch time...	8	9	–	–	17	11	10	–
Average minutes per day.............................	37	37	–	–	34	36	34	–
Paid rest time..	48	49	–	–	58	56	53	–
Average minutes per day.............................	27	26	–	–	29	29	29	–
Paid funeral leave...	47	50	50	51	56	63	65	62
Average days per occurrence.......................	2.9	3.0	3.1	3.0	3.7	3.7	3.7	3.7
Paid holidays..	84	82	82	80	81	74	75	73
Average days per year[1]................................	9.5	9.2	7.5	7.6	10.9	13.6	14.2	11.5
Paid personal leave..	11	12	13	14	38	39	38	38
Average days per year..................................	2.8	2.6	2.6	3.0	2.7	2.9	2.9	3.0
Paid vacations...	88	88	88	86	72	67	67	66
Paid sick leave[2]...	47	53	50	50	97	95	95	94
Unpaid leave...	17	18	–	–	57	51	59	–
Unpaid paternity leave....................................	8	7	–	–	30	33	44	–
Unpaid family leave..	–	–	47	48	–	–	–	93
Insurance plans								
Participants in medical care plans.........................	69	71	66	64	93	93	90	87
Percent of participants with coverage for:								
Home health care..	79	80	–	–	76	82	87	84
Extended care facilities..................................	83	84	–	–	78	79	84	81
Physical exam...	26	28	–	–	36	36	47	55
Percent of participants with employee contribution required for:								
Self coverage..	42	47	52	52	35	38	43	47
Average monthly contribution........................	$25.13	$36.51	$40.97	$42.63	$15.74	$25.53	$28.97	$30.20
Family coverage..	67	73	76	75	71	65	72	71
Average monthly contribution........................	$109.34	$150.54	$159.63	$181.53	$71.89	$117.59	$139.23	$149.70
Participants in life insurance plans.......................	64	64	61	62	85	88	89	87
Percent of participants with:								
Accidental death and dismemberment insurance...	78	76	79	77	67	67	74	64
Survivor income benefits................................	1	1	2	1	1	1	1	2
Retiree protection available............................	19	25	20	13	55	45	46	46
Participants in long-term disability insurance plans..	19	23	20	22	31	27	28	30
Participants in sickness and accident insurance plans..	6	26	26	–	14	21	22	21
Participants in short-term disability plans[2]..............	–	–	–	29	–	–	–	–
Retirement plans								
Participants in defined benefit pension plans..........	20	22	15	15	93	90	87	91
Percent of participants with:								
Normal retirement prior to age 65....................	54	50	–	47	92	89	92	92
Early retirement available...............................	95	95	–	92	90	88	89	87
Ad hoc pension increase in last 5 years..........	7	4	–	–	33	16	10	13
Terminal earnings formula..............................	58	54	–	53	100	100	100	99
Benefit coordinated with Social Security..........	49	46	–	44	18	8	10	49
Participants in defined contribution plans...............	31	33	34	38	9	9	9	9
Participants in plans with tax-deferred savings arrangements..	17	24	23	28	28	45	45	24
Other benefits								
Employees eligible for:								
Flexible benefits plans....................................	1	2	3	4	5	5	5	5
Reimbursement accounts[3]..............................	8	14	19	12	5	31	50	64
Premium conversion plans	–	–	–	7	–	–	–	–

[1] Methods used to calculate the average number of paid holidays were revised in 1994 to count partial days more precisely. Average holidays for 1994 are not comparable with those reported in 1990 and 1992.

[2] The definitions for paid sick leave and short-term disability (previously sickness and accident insurance) were changed for the 1996 survey. Paid sick leave now includes only plans that specify either a maximum number of days per year or unlimited days. Short-term disability now includes all insured, self-insured, and State-mandated plans available on a per-disability basis, as well as the unfunded per-disability plans previously reported as sick leave.

Sickness and accident insurance, reported in years prior to this survey, included only insured, self-insured, and State-mandated plans providing per-disability benefits at less than full pay.

[3] Prior to 1996, reimbursement accounts included premium conversion plans, which specifically allow medical plan participants to pay required plan premiums with pretax dollars. Also, reimbursement accounts that were part of flexible benefit plans were tabulated separately.

NOTE: Dash indicates data not available.

31. Work stoppages involving 1,000 workers or more

Measure	Annual totals		2000	2001											
	2000	2001	Dec.	Jan.[p]	Feb.[p]	Mar.[p]	Apr.[p]	May[p]	June[p]	July[p]	Aug.[p]	Sept.[p]	Oct.[p]	Nov.[p]	Dec.[p]
Number of stoppages:															
Beginning in period............................	39	29	0	1	1	3	4	7	3	2	3	2	1	0	2
In effect during period........................	40	30	3	2	1	4	5	8	5	3	4	3	4	1	2
Workers involved:															
Beginning in period (in thousands).....	394	99	8.7	2.0	1.2	7.8	19.4	22.1	4.7	2.2	5.8	3.0	24.9	.0	6.0
In effect during period (in thousands).	397	102	10.3	4.7	1.2	9.0	20.7	23.4	9.0	3.3	6.9	4.1	29.0	1.6	6.0
Days idle:															
Number (in thousands).......................	20,419	1,151	58.9	37.1	3.6	33.4	230.5	201.6	73.2	62.1	71.5	55.7	316.4	11.2	55.0
Percent of estimated working time[1]....	.06	.00	(2)	(2)	(2)	(2)	.01	.01	(2)	(2)	(2)	(2)	.01	(2)	(2)

[1] Agricultural and government employees are included in the total employed and total working time; private household, forestry, and fishery employees are excluded. An explanation of the measurement of idleness as a percentage of the total time worked is found in " 'Total economy' measures of strike idleness," *Monthly Labor Review*, October 1968, pp. 54–56.

[2] Less than 0.005.

[p] = preliminary.

NOTE: Dash indicates data not available.

32. Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		2001									2002			
	2000	2001	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS															
All items	172.2	177.1	176.9	177.7	178.0	177.5	177.5	178.3	177.7	177.4	176.7	177.1	177.8	178.8	179.8
All items (1967 = 100)	515.8	530.4	529.9	532.2	533.3	531.6	531.8	534.0	532.2	531.3	5292.0	530.6	532.7	535.5	538.6
Food and beverages	168.4	173.6	172.4	172.9	173.4	174.0	174.4	174.6	175.3	175.2	175.2	176.2	176.4	176.6	176.7
Food	167.8	173.1	171.9	172.5	173.0	173.5	173.9	174.1	174.9	174.6	174.7	175.8	175.9	176.1	176.2
Food at home	167.9	173.4	172.2	172.8	173.3	173.9	174.2	174.3	175.2	174.7	174.7	176.2	176.0	176.3	176.4
Cereals and bakery products	188.3	193.8	192.5	193.2	194.2	194.9	195.9	195.1	195.2	194.9	195.3	196.7	197.6	197.0	198.1
Meats, poultry, fish, and eggs	154.5	161.3	160.7	160.8	161.7	162.3	162.4	162.4	163.5	162.7	162.0	162.1	161.8	162.8	162.5
Dairy and related products[1]	160.7	167.1	163.4	164.7	166.9	168.3	168.9	169.4	170.8	171.2	170.8	169.9	170.1	169.4	168.7
Fruits and vegetables	204.6	212.2	213.3	213.1	211.8	210.7	208.8	212.1	213.5	212.9	214.4	224.8	223.3	225.8	223.4
Nonalcoholic beverages and beverage materials	137.8	139.2	138.9	138.1	138.6	138.9	140.0	139.2	139.9	139.5	18.5	139.5	140.0	140.1	140.1
Other foods at home	155.6	159.6	157.6	159.6	159.5	160.4	161.0	160.2	160.9	160.3	160.9	161.3	160.4	159.9	161.5
Sugar and sweets	154.0	155.7	154.0	155.8	155.7	156.1	156.1	156.6	156.4	154.9	156.1	158.4	158.5	157.2	159.6
Fats and oils	147.4	155.7	151.5	154.7	156.7	157.8	158.5	158.5	159.5	155.6	156.9	158.3	157.2	156.4	156.5
Other foods	172.2	176.0	174.4	176.4	175.7	176.8	177.6	176.2	177.0	177.6	177.9	177.4	176.3	175.9	177.8
Other miscellaneous foods[1,2]	107.5	108.9	108.5	108.8	107.7	109.6	109.5	108.9	108.9	110.6	108.5	108.9	108.0	107.8	108.0
Food away from home[1]	169.0	173.9	172.7	173.1	173.6	174.1	174.7	175.1	175.6	175.8	176.0	176.4	177.0	177.1	177.2
Other food away from home[1,2]	109.0	113.4	111.8	112.4	112.6	113.8	114.3	115.3	115.4	115.5	115.5	115.5	115.8	116.3	116.9
Alcoholic beverages	174.7	179.3	178.1	178.5	179.1	179.7	180.0	180.4	180.8	181.2	180.9	181.8	182.6	182.5	182.9
Housing	169.6	176.4	175.4	175.9	177.3	177.6	178.0	177.4	176.7	176.9	176.9	177.6	178.5	179.1	179.5
Shelter	193.4	200.6	199.2	199.6	200.7	201.4	202.4	202.0	202.4	202.9	203.2	204.5	206.1	207.0	207.5
Rent of primary residence	183.9	192.1	190.2	191.0	191.6	192.3	193.1	193.9	194.7	195.5	196.4	197.0	197.7	198.2	198.5
Lodging away from home	117.5	118.6	121.8	120.0	123.7	124.0	125.2	116.8	114.5	111.6	108.0	113.1	119.3	121.9	122.1
Owners' equivalent rent of primary residence[3]	198.7	206.3	204.2	204.9	205.7	206.3	207.3	208.1	209.0	210.1	210.9	211.6	212.2	212.8	213.3
Tenants' and household insurance[1,2]	103.7	106.2	105.5	106.8	107.0	106.6	106.6	106.7	106.9	106.9	106.3	106.4	106.8	106.8	107.2
Fuels and utilities	137.9	150.2	149.7	151.3	155.7	154.8	152.7	150.6	144.6	143.5	142.2	141.5	140.0	140.2	140.3
Fuels	122.8	135.4	135.1	136.8	141.6	140.5	138.0	135.7	129.1	127.8	126.2	125.3	123.7	123.8	123.8
Fuel oil and other fuels	129.7	129.3	134.4	131.9	129.6	123.8	122.1	125.3	121.5	118.3	112.7	112.9	112.3	112.8	115.1
Gas (piped) and electricity	128.0	142.4	141.6	143.8	149.4	148.6	146.0	143.1	135.9	134.7	133.5	132.4	130.6	130.7	130.6
Household furnishings and operations	128.2	129.1	129.1	128.9	129.2	129.2	129.1	129.4	129.0	129.1	128.9	128.7	128.6	128.7	128.9
Apparel	129.6	127.3	131.9	129.8	126.3	122.6	122.6	126.8	129.5	128.0	123.7	120.4	123.5	128.2	128.8
Men's and boys' apparel	129.7	125.7	128.2	129.1	125.8	122.5	122.5	121.4	123.7	127.5	127.4	122.8	120.8	122.0	125.2	125.6
Women's and girls' apparel	121.5	119.3	127.0	122.3	117.5	111.6	112.1	120.3	122.1	119.4	114.8	109.7	115.3	121.3	122.2
Infants' and toddlers' apparel[1]	130.6	129.2	131.4	130.6	127.3	124.5	126.3	129.3	131.5	132.4	128.5	125.0	127.2	129.9	198.9
Footwear	123.8	123.0	124.9	124.4	122.1	121.3	121.9	122.9	124.9	123.7	120.6	117.1	119.5	123.5	124.5
Transportation	153.3	154.3	156.1	159.2	158.3	154.4	153.3	155.5	152.3	150.2	148.5	148.6	148.4	150.5	153.7
Private transportation	149.1	150.0	152.1	155.3	154.0	149.9	148.8	151.2	148.1	146.1	144.3	144.4	144.1	146.3	149.6
New and used motor vehicles[2]	100.8	101.3	101.8	101.4	101.1	100.8	100.5	100.2	100.6	101.3	101.6	101.0	100.1	99.6	99.3
New vehicles	142.8	142.1	142.7	142.3	141.7	141.2	140.3	140.2	141.0	142.6	143.5	142.7	141.2	140.7	140.4
Used cars and trucks[1]	155.8	158.7	159.7	159.1	158.9	158.3	158.0	157.3	157.8	157.4	157.2	155.6	153.9	152.1	152.8
Motor fuel	129.3	124.7	133.6	146.8	142.0	125.6	121.9	131.4	116.3	104.5	96.1	97.9	98.2	107.7	121.4
Gasoline (all types)	128.6	124.0	132.8	146.0	141.3	124.9	121.2	130.7	115.6	103.8	95.4	97.2	97.6	107.1	120.8
Motor vehicle parts and equipment	101.5	104.8	104.2	104.4	104.4	105.1	104.9	105.2	105.5	105.8	105.8	106.2	106.1	106.5	106.8
Motor vehicle maintenance and repair	177.3	183.5	181.9	182.5	182.7	183.4	184.0	185.1	186.0	186.4	186.4	187.1	188.0	188.5	189.0
Public transportation	209.6	210.6	208.3	209.3	216.3	216.1	213.7	212.7	209.1	205.1	204.8	205.8	207.3	207.9	209.7
Medical care	260.8	272.8	270.8	271.4	272.5	273.1	274.4	275.0	275.9	276.7	277.3	279.6	281.0	282.0	283.2
Medical care commodities	238.1	247.6	245.7	246.6	248.1	248.5	249.1	249.6	250.2	250.6	251.6	252.6	253.7	254.1	254.8
Medical care services	266.0	278.8	276.8	277.3	278.3	278.9	280.5	281.0	282.0	283.0	283.5	286.2	287.7	288.9	290.2
Professional services	237.7	246.5	245.6	245.8	246.5	246.8	247.7	247.9	248.4	248.8	248.9	250.6	251.4	251.9	252.5
Hospital and related services	317.3	338.3	333.6	335.1	336.6	337.9	341.2	342.6	344.8	347.1	348.3	353.1	356.4	359.4	362.4
Recreation[2]	103.3	104.9	105.0	105.0	104.8	105.0	105.1	105.2	105.3	105.5	105.3	105.7	105.9	106.1	106.5
Video and audio[1,2]	101.0	101.5	101.7	101.6	101.3	101.7	101.7	101.3	101.3	101.4	101.2	102.1	102.9	102.9	102.9
Education and communication[2]	102.5	105.2	104.1	104.0	104.4	104.8	105.8	106.6	107.1	107.0	106.9	107.2	107.3	106.6	106.2
Education[2]	112.5	118.5	116.1	116.4	116.9	117.2	119.5	121.7	122.2	122.3	122.0	122.6	123.2	123.3	123.3
Educational books and supplies	279.9	295.9	290.8	290.7	293.9	295.1	298.0	305.4	307.2	304.7	294.7	303.0	314.4	314.2	314.4
Tuition, other school fees, and child care	324.0	341.1	334.1	335.0	336.2	337.2	343.9	350.0	351.5	352.0	352.2	353.2	353.9	354.1	354.1
Communication[1,2]	93.6	93.3	93.3	92.9	93.1	93.6	93.5	93.1	93.6	93.3	93.4	93.4	93.1	92.0	91.2
Information and information processing[1,2]	92.8	92.3	92.3	91.8	92.1	92.5	92.4	92.0	92.5	92.2	92.3	92.2	92.0	90.8	90.0
Telephone services[1,2]	98.5	99.3	99.0	98.7	99.0	99.6	99.6	99.2	99.9	99.6	99.6	100.3	100.3	99.1	98.2
Information and information processing other than telephone services[1,4]	25.9	21.3	22.1	21.7	21.4	21.3	20.7	20.3	20.2	20.0	19.8	19.4	19.0	18.8	18.6
Personal computers and peripheral equipment[1,2]	41.1	29.5	31.7	30.4	29.8	29.3	27.8	26.7	26.4	25.8	25.3	24.6	23.8	23.1	22.9
Other goods and services	271.1	282.6	277.7	281.3	281.2	285.8	283.3	287.8	285.6	289.2	286.4	287.2	290.2	288.5	292.9
Tobacco and smoking products	394.9	425.2	424.2	418.7	421.0	441.2	424.6	444.0	429.9	446.7	431.7	432.8	449.3	433.4	461.4
Personal care[1]	165.6	170.5	169.6	169.5	170.0	170.7	171.2	171.9	172.3	172.6	172.6	173.2	173.7	174.1	174.4
Personal care products[1]	153.7	155.1	155.8	153.2	154.6	155.1	154.7	155.5	155.4	155.4	155.4	155.2	155.5	155.1	155.4
Personal care services[1]	178.1	184.3	183.4	184.1	184.1	184.8	185.2	185.5	185.9	186.8	186.4	186.3	186.4	187.3	187.9

See footnotes at end of table.

32. Continued—Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average 2000	2001	2001 Apr.	May	June	July	Aug.	Sept.	Oct.	2002 Jan.	Feb.	Mar.	Apr.
Miscellaneous personal services....................	252.3	263.1	260.2	261.0	261.8	263.2	265.5	266.4	267.3	270.4	271.8	272.9	273.2
Commodity and service group:													
Commodities..............................	149.2	150.7	151.9	152.9	152.1	150.4	149.8	151.5	150.5	147.8	148.1	149.4	151.0
Food and beverages.............................	168.4	173.6	172.4	172.9	173.4	174.0	174.4	174.6	175.3	176.2	176.4	176.6	176.7
Commodities less food and beverages............	137.7	137.2	139.7	140.8	139.4	136.5	135.4	138.0	136.1	131.6	132.1	133.7	136.0
Nondurables less food and beverages...........	147.4	147.1	151.0	153.5	151.3	146.3	144.8	149.6	146.0	137.9	139.6	143.6	148.4
Apparel	129.6	127.3	131.9	129.8	126.3	122.6	122.6	126.8	129.5	120.4	123.5	128.2	128.8
Nondurables less food, beverages, and apparel...........................	162.5	163.4	167.0	172.0	170.4	164.5	162.1	167.5	160.4	152.6	153.6	157.3	164.7
Durables....................................	125.4	124.6	125.4	124.9	124.5	124.2	123.6	123.4	123.6	123.6	122.7	122.1	121.9
Services...................................	195.3	203.4	201.9	202.5	204.0	204.5	205.2	204.9	204.7	206.3	207.3	208.0	208.4
Rent of shelter[3]................................	201.3	208.9	207.4	207.8	209.0	209.7	210.8	210.3	210.8	213.0	214.7	215.6	216.1
Transporatation services......................	196.1	201.9	200.1	200.4	202.0	202.6	202.7	202.8	203.4	205.2	206.5	207.3	207.9
Other services.............................	229.9	238.0	236.2	236.4	236.7	237.7	239.4	240.6	241.4	242.9	243.5	243.6	243.8
Special indexes:													
All items less food............................	173.0	177.8	177.8	178.6	179.0	178.2	178.2	179.0	178.2	177.4	178.2	179.2	180.4
All items less shelter..........................	165.7	169.7	170.1	170.9	171.0	170.0	169.7	170.9	169.9	168.4	168.7	169.7	170.9
All items less medical care....................	167.3	171.9	171.8	172.6	172.9	172.3	172.3	173.0	172.4	171.7	172.4	173.3	174.3
Commodities less food........................	139.2	138.9	141.2	142.4	141.0	138.2	137.2	139.7	137.8	133.5	133.9	135.6	137.8
Nondurables less food.........................	149.1	149.1	152.8	155.1	153.1	148.3	146.9	151.5	148.1	140.5	142.2	145.9	150.4
Nondurables less food and apparel................	162.9	164.1	167.4	172.0	170.6	165.2	163.0	168.0	161.5	154.5	155.4	158.7	165.5
Nondurables.................................	158.2	160.6	162.0	163.6	162.7	160.3	159.7	162.3	160.8	157.0	158.0	160.2	162.7
Services less rent of shelter[3]..................	202.9	212.3	210.6	211.4	213.3	213.7	214.0	213.9	213.0	213.9	214.3	214.8	215.1
Services less medical care services..............	188.9	196.6	195.2	195.7	197.2	197.8	198.4	198.1	197.8	199.2	200.2	200.8	201.2
Energy......................................	124.6	129.3	133.1	140.1	140.5	132.4	129.4	132.5	122.1	111.7	111.0	115.6	122.2
All items less energy........................	178.6	183.5	182.9	182.9	183.3	183.6	184.1	184.5	185.1	185.7	186.5	187.1	187.5
All items less food and energy................	181.3	186.1	185.6	185.5	185.9	186.2	186.6	187.1	187.6	188.2	189.2	189.8	190.3
Commodities less food and energy..............	144.9	145.3	146.6	145.7	144.9	144.4	143.8	145.2	145.6	143.7	144.2	144.6	145.1
Energy commodities......................	129.5	125.2	133.8	145.6	141.1	125.6	122.0	131.0	116.9	99.3	99.5	108.6	121.6
Services less energy......................	202.1	209.6	208.0	208.4	209.4	210.1	211.2	211.2	211.7	213.8	215.1	215.9	216.3
CONSUMER PRICE INDEX FOR URBAN WAGE EARNERS AND CLERICAL WORKERS													
All items.....................................	163.2	173.5	173.5	174.4	174.6	173.8	173.8	174.8	174.0	173.2	173.7	174.7	175.8
All items (1967 = 100).........................	486.2	516.8	516.7	519.4	520.0	517.8	517.6	520.6	518.3	515.0	517.5	520.2	523.7
Food and beverages...........................	163.8	173.0	171.9	172.3	172.8	173.4	173.8	174.0	174.8	175.7	175.8	176.1	176.1
Food..	163.4	172.5	171.4	171.9	172.4	173.0	173.4	173.5	174.3	175.2	175.3	175.6	175.5
Food at home...............................	163.0	172.4	171.3	171.8	172.4	173.0	173.3	173.4	174.3	175.3	175.1	175.5	175.3
Cereals and bakery products.................	184.7	193.6	192.2	192.9	193.9	194.5	195.6	194.8	195.1	196.7	197.5	197.0	197.9
Meats, poultry, fish, and eggs..............	147.6	161.2	160.7	160.6	161.4	162.1	162.0	162.3	163.2	162.0	161.6	162.7	162.1
Dairy and related products[1].................	159.4	167.1	163.5	164.7	166.9	168.3	168.9	169.4	170.8	169.7	170.0	169.2	168.7
Fruits and vegetables.....................	201.8	210.8	211.7	211.5	210.5	209.5	208.0	211.0	212.2	223.2	222.2	224.9	222.0
Nonalcoholic beverages and beverage materials...................	133.2	138.4	138.2	137.2	137.8	138.0	139.3	138.4	139.2	138.8	139.5	139.7	139.4
Other foods at home.......................	152.8	159.1	157.1	159.1	159.1	160.0	160.5	159.8	160.4	161.0	160.1	159.6	161.0
Sugar and sweets.......................	152.2	155.6	153.7	155.8	155.5	156.0	156.1	156.2	156.2	158.5	158.5	157.1	153.4
Fats and oils..........................	147.9	155.4	151.4	154.3	156.4	157.4	158.0	158.1	159.1	158.0	157.0	156.3	156.2
Other foods..........................	168.8	176.3	174.6	176.5	176.0	177.2	177.9	176.5	177.3	177.9	176.8	176.5	178.2
Other miscellaneous foods[1,2]...........	104.6	109.1	108.4	108.7	108.0	109.9	109.7	109.2	109.5	109.3	108.5	108.3	108.5
Food away from home[1].......................	165.0	173.8	172.7	173.1	173.5	174.0	174.7	175.0	175.6	176.4	176.9	177.0	177.1
Other food away from home[1,2].............	105.1	113.6	112.0	112.5	112.8	114.0	114.4	115.6	115.7	115.8	116.0	116.8	117.4
Alcoholic beverages.........................	168.8	178.8	177.6	178.0	178.4	179.2	179.7	180.1	180.5	181.4	182.1	182.2	182.8
Housing.......................................	160.0	172.1	171.0	171.7	173.0	173.3	173.5	173.2	172.5	173.4	173.9	174.4	174.8
Shelter..	181.6	194.5	192.9	193.5	194.4	195.0	195.9	196.0	196.6	198.7	199.8	200.6	201.0
Rent of primary residence....................	177.1	191.5	189.6	190.4	191.0	191.7	192.4	193.3	194.0	196.3	197.0	197.5	197.8
Lodging away from home[2].................	122.2	118.4	121.2	119.9	123.2	123.7	124.4	116.8	114.8	113.2	119.4	122.2	122.0
Owners' equivalent rent of primary residence[3]	175.7	187.6	185.7	186.3	187.0	187.5	188.5	189.2	190.0	192.3	192.9	193.3	193.9
Tenants' and household insurance[1,2]........	101.6	106.4	105.8	106.9	107.2	106.7	106.8	106.8	107.0	106.4	106.8	106.9	107.5
Fuels and utilities.........................	128.7	149.5	148.8	150.8	155.2	154.4	152.2	150.1	144.0	140.8	139.4	139.6	139.6
Fuels....................................	113.0	134.2	133.6	135.7	140.5	139.5	137.0	134.7	127.9	124.2	122.7	122.8	122.7
Fuel oil and other fuels.................	91.7	129.2	133.9	131.5	129.2	123.1	121.5	125.3	121.4	113.0	112.4	112.7	114.7
Gas (piped) and electricity..............	120.4	141.5	140.4	142.9	148.5	147.8	145.2	142.2	135.0	131.4	129.7	129.8	129.6
Household furnishings and operations............	124.7	125.8	126.0	125.7	125.9	125.8	125.7	126.0	125.5	125.0	124.9	124.9	125.1
Apparel	130.1	126.1	130.5	128.5	125.2	121.9	121.6	125.6	128.3	119.6	122.4	126.9	127.9
Men's and boys' apparel....................	131.2	125.8	128.3	129.2	126.3	122.9	121.6	123.7	127.3	121.0	122.2	125.2	125.8
Women's and girls' apparel................	121.3	117.3	124.7	120.2	115.6	110.2	110.1	118.3	120.2	108.5	113.8	119.7	120.9
Infants' and toddlers' apparel[1]..............	130.3	130.9	133.2	132.0	128.6	126.2	128.3	131.1	133.5	126.7	128.4	131.7	131.7
Footwear...................................	126.2	123.1	125.2	124.5	122.1	121.4	122.0	123.0	124.9	117.7	119.3	122.8	124.4
Transportation.................................	143.4	153.6	155.8	159.2	157.9	153.4	152.5	155.1	151.4	147.5	147.1	149.2	152.7
Private transportation.......................	140.7	150.8	153.2	156.6	155.1	150.4	149.5	152.3	148.6	144.6	144.2	146.4	149.8
New and used motor vehicles[2]...............	100.4	101.9	102.4	102.0	101.7	101.4	101.0	100.7	101.1	101.3	100.3	99.7	99.5

See footnotes at end of table.

32. Continued—Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average 2000	Annual average 2001	2001 Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	2002 Jan.	Feb.	Mar.	Apr.
New vehicles..	143.9	143.2	143.8	143.4	142.7	142.3	141.4	141.3	142.1	143.8	144.7	143.8	142.3	141.8	141.5
Used cars and trucks[1].........................	157.1	159.8	160.9	160.2	160.0	159.3	159.0	158.2	158.7	158.3	158.1	156.5	154.8	153.0	152.6
Motor fuel...	129.5	124.9	134.0	147.4	142.1	124.9	122.0	132.4	116.2	104.4	96.3	98.2	98.5	108.0	121.7
Gasoline (all types).......................	128.8	124.2	133.3	146.7	141.1	124.2	121.3	131.7	115.5	103.8	95.7	97.6	97.9	107.5	121.2
Motor vehicle parts and equipment....	100.9	104.0	103.5	103.6	103.6	104.3	104.1	104.4	104.7	105.0	104.9	105.3	105.3	105.7	106.0
Motor vehicle maintenance and repair......	178.8	185.1	183.4	184.1	184.4	185.0	185.6	186.7	187.5	187.8	187.9	188.6	189.5	189.9	190.5
Public transportation............................	203.4	204.9	202.7	203.5	209.5	209.5	207.7	207.0	203.7	200.4	200.1	201.0	202.5	203.0	204.5
Medical care...	259.9	271.8	269.9	270.4	271.5	272.0	273.4	273.9	274.9	275.6	276.2	278.5	279.8	280.9	281.9
Medical care commodities....................	233.6	242.7	241.0	241.7	243.2	243.6	244.1	244.6	245.2	245.6	246.7	247.6	248.5	249.0	249.6
Medical care services.........................	265.9	278.5	276.5	277.0	278.0	278.5	280.2	280.7	281.7	282.6	283.0	285.7	287.2	288.4	289.6
Professional services.....................	239.6	248.7	247.8	248.0	248.7	249.0	249.9	250.1	250.5	250.9	251.0	252.8	253.6	254.0	254.6
Hospital and related services...............	313.2	333.8	329.1	330.6	332.0	333.5	337.0	338.3	340.5	342.7	343.6	348.2	351.4	354.3	357.1
Recreation[2]..	102.4	103.6	103.7	103.7	103.5	103.7	103.9	103.8	103.8	104.0	103.8	104.2	104.5	104.6	105.0
Video and audio[1,2]...............................	100.7	100.9	101.2	101.1	100.7	101.1	101.0	100.6	100.6	100.7	100.5	101.4	102.2	102.1	102.2
Education and communication[2]................	102.7	105.3	104.2	104.1	104.5	104.9	105.8	106.5	107.1	106.9	106.9	107.1	107.2	106.5	106.0
Education[2]...	112.8	118.7	116.4	116.7	117.2	117.6	119.6	121.7	122.3	122.3	122.1	122.7	123.3	123.3	123.3
Educational books and supplies..............	283.3	299.9	294.7	294.5	298.2	299.3	302.2	309.8	311.7	308.9	297.3	305.2	315.2	315.1	315.3
Tuition, other school fees, and child care.....	318.2	334.7	328.2	329.1	330.3	331.3	337.3	342.9	344.4	344.9	345.2	346.2	347.0	347.2	347.2
Communication[1,2].................................	94.6	94.5	94.4	94.0	94.3	94.8	94.7	94.3	94.9	94.5	94.6	94.7	94.5	93.3	92.6
Information and information processing[1,2].....	94.1	93.8	93.8	93.4	93.6	94.0	94.0	93.6	94.2	93.8	93.9	94.0	93.7	92.6	91.7
Telephone services[1,2]......................	98.7	99.4	99.2	98.8	99.2	99.7	99.8	99.4	100.1	99.7	99.9	100.4	100.5	99.3	98.4
Information and information processing other than telephone services[1,4]...	26.8	22.1	22.8	22.4	22.2	22.0	21.5	21.2	21.0	20.8	20.6	20.1	19.7	19.5	19.3
Personal computers and peripheral equipment[1,2].................................	40.5	29.1	31.1	29.9	29.4	28.7	27.4	26.6	26.1	25.5	25.0	24.3	23.5	22.8	22.5
Other goods and services...........................	276.5	289.5	288.2	286.8	287.9	293.8	290.0	295.5	292.4	297.3	293.3	294.0	298.3	295.2	301.7
Tobacco and smoking products..............	395.2	426.1	424.8	419.8	421.6	441.9	425.6	444.7	430.9	448.3	432.9	433.5	450.7	434.1	462.7
Personal care[1].....................................	165.5	170.3	169.4	169.3	169.9	170.6	170.9	171.4	171.9	172.3	172.3	172.7	173.2	173.7	173.9
Personal care products[1]......................	154.2	155.7	156.0	153.8	155.4	155.9	155.5	156.1	156.1	156.1	156.0	155.9	156.3	156.0	156.2
Personal care services[1]......................	178.6	184.9	183.9	184.7	184.8	185.4	185.9	186.1	186.5	187.4	187.1	187.0	187.1	188.0	188.7
Miscellaneous personal services..............	251.9	262.8	260.0	260.7	261.6	263.2	264.9	265.6	266.8	267.5	268.0	269.8	271.4	272.5	272.6
Commodity and service group:															
Commodities..	149.8	151.4	152.8	153.9	153.0	151.2	150.5	152.5	151.2	150.1	148.4	148.3	148.6	149.8	151.7
Food and beverages..........................	167.7	173.0	171.9	172.3	172.8	173.4	173.8	174.0	174.8	174.5	174.6	175.7	175.8	176.1	176.1
Commodities less food and beverages...........	139.0	138.7	141.2	142.6	141.1	138.0	136.9	139.8	137.4	135.9	133.4	132.7	133.1	134.7	137.5
Nondurables less food and beverages...........	149.1	149.0	153.1	156.2	153.6	148.2	146.5	152.0	147.4	144.2	139.4	138.9	140.7	144.8	150.5
Apparel	128.3	126.1	130.5	128.5	125.2	121.9	121.6	125.6	128.3	127.2	123.0	119.6	122.4	126.9	127.9
Nondurables less food, beverages, and apparel....................................	165.3	166.3	170.5	176.3	174.1	167.3	164.8	171.4	162.7	158.2	153.1	154.2	155.4	159.4	168.1
Durables..	125.8	125.3	126.0	125.5	125.2	124.8	124.3	124.1	124.3	124.8	124.9	124.1	123.1	122.3	122.1
Services..	191.6	199.6	198.0	198.7	200.1	200.6	201.2	201.1	201.0	201.4	201.7	202.5	203.3	203.9	204.2
Rent of shelter[3].................................	180.5	187.3	185.8	186.3	187.2	187.8	188.7	188.7	189.3	189.9	190.4	191.4	192.5	193.2	193.7
Transporation services..........................	192.9	199.1	197.2	197.6	198.9	199.5	199.8	200.1	200.9	202.3	202.6	203.4	204.7	205.6	206.2
Other services....................................	225.9	233.7	231.9	232.2	232.6	233.6	235.1	235.9	236.8	237.2	237.3	238.3	239.0	238.8	283.9
Special indexes:															
All items less food...............................	169.1	173.6	173.8	174.7	174.9	173.9	173.7	174.9	173.8	173.4	172.5	172.7	173.3	174.3	175.7
All items less shelter............................	163.8	167.6	168.0	169.1	169.0	167.8	167.5	168.8	167.6	166.9	165.7	165.8	166.1	167.1	168.5
All items less medical care....................	164.7	169.1	169.1	170.0	170.2	169.4	169.3	170.3	169.5	169.1	168.3	168.5	169.0	170.0	171.0
Commodities less food...........................	140.4	140.2	142.7	144.1	142.6	139.6	138.5	141.3	139.0	137.6	135.1	134.5	134.8	136.5	139.1
Nondurables less food..........................	150.7	150.8	154.7	157.6	155.3	150.1	148.5	153.8	149.4	146.4	141.8	141.8	143.1	147.0	152.5
Nondurables less food and apparel..............	165.4	166.7	170.5	175.9	173.9	167.7	165.4	171.5	163.5	159.5	154.7	154.7	157.0	160.7	168.7
Nondurables..	158.9	161.4	163.0	164.8	163.8	161.2	160.5	163.5	161.5	159.7	157.3	157.5	158.5	160.8	163.7
Services less rent of shelter[3]................	180.1	188.5	187.0	187.8	189.6	189.9	190.1	189.9	189.0	189.3	189.2	189.8	190.1	190.5	190.7
Services less medical care services.............	185.4	193.1	191.6	192.3	193.6	194.2	194.7	194.6	194.4	194.8	195.0	195.7	196.5	197.0	197.4
Energy...	124.8	128.7	132.9	140.6	140.3	131.3	128.6	132.6	121.2	114.8	110.0	110.5	109.8	114.7	121.6
All items less energy............................	175.1	179.8	179.2	179.2	179.5	179.8	180.1	180.7	181.3	181.8	181.5	181.6	182.5	182.9	183.4
All items less food and energy..................	177.1	181.7	181.3	181.2	181.4	181.7	181.9	182.6	183.2	183.8	183.5	183.6	184.4	184.9	185.5
Commodities less food and energy.............	145.4	146.1	147.3	146.4	145.6	145.4	144.6	146.0	146.3	146.9	145.6	144.4	144.8	145.0	145.8
Energy commodities............................	129.7	125.3	134.2	146.6	141.5	125.0	122.1	132.1	116.7	105.5	97.5	99.2	99.5	108.7	121.9
Services less energy............................	198.7	206.0	204.4	204.8	205.7	206.3	207.3	207.6	208.3	209.0	209.4	210.4	211.5	212.1	212.6

[1] Not seasonally adjusted.

[2] Indexes on a December 1997 = 100 base.

[3] Indexes on a December 1982 = 100 base.

[4] Indexes on a December 1988 = 100 base.

Dash indicates data not available.

NOTE: Index applied to a month as a whole, not to any specific date.

33. Consumer Price Index: U.S. city average and available local area data: all items

[1982–84 = 100, unless otherwise indicated]

	Pricing sched-ule[1]	All Urban Consumers						Urban Wage Earners					
		2001		2002				2001		2002			
		Nov.	Dec	Jan.	Feb.	Mar.	Apr	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
U.S. city average............................	M	177.4	176.7	177.1	177.8	178.8	179.9	173.7	172.9	173.2	173.7	174.7	175.8
Region and area size[2]													
Northeast urban...........................	M	185.0	184.2	184.9	186.1	187.0	187.8	181.8	181.0	181.4	182.3	183.1	184.2
Size A—More than 1,500,000..........	M	186.1	185.4	186.2	187.8	188.6	189.3	181.9	181.1	181.6	182.8	183.6	184.5
Size B/C—50,000 to 1,500,000[3]..........	M	110.9	10.3	110.5	110.5	111.2	111.9	110.5	109.9	110.1	110.1	110.8	111.7
Midwest urban[4]............................	M	172.5	171.9	172.1	172.5	173.6	174.7	168.2	167.6	167.7	168.1	169.1	170.3
Size A—More than 1,500,000..........	M	174.2	173.8	174.1	174.7	176.0	177.3	169.1	168.7	168.8	169.4	170.6	172.2
Size B/C—50,000 to 1,500,000[3]..........	M	110.0	109.6	109.5	109.6	110.2	110.7	109.8	109.2	109.2	109.2	109.7	110.2
Size D—Nonmetropolitan (less than 50,000).................	M	166.3	165.5	166.2	166.6	167.1	168.1	164.1	163.3	163.9	164.3	164.8	166.0
South urban...............................	M	171.0	170.3	170.6	171.0	172.1	173.1	169.0	168.1	168.3	168.6	169.6	170.8
Size A—More than 1,500,000..........	M	172.2	171.7	171.7	172.4	173.3	172.4	169.6	169.0	169.0	169.5	170.5	171.7
Size B/C—50,000 to 1,500,000[3]..........	M	109.4	108.9	109.2	109.3	110.0	110.8	109.0	108.5	108.6	108.7	109.3	110.2
Size D—Nonmetropolitan (less than 50,000)..........	M	168.9	167.7	168.6	168.6	169.9	170.5	169.9	168.3	169.2	168.9	170.2	171.2
West urban.................................	M	182.3	181.6	182.4	183.2	184.0	185.1	177.6	176.8	177.4	178.1	179.0	180.0
Size A—More than 1,500,000..........	M	112.0	111.6	111.9	185.4	186.2	187.2	177.7	176.9	177.7	178.6	179.5	180.5
Size B/C—50,000 to 1,500,000[3]..........	M	112.0	111.6	111.9	112.4	112.8	113.7	111.8	111.2	111.4	111.8	112.2	112.9
Size classes:													
A[5]............	M	161.7	161.1	161.6	162.5	163.4	164.2	160.0	159.4	159.7	160.5	161.3	162.4
B/C[3]............	M	110.2	109.7	109.9	110.1	110.7	111.4	109.9	109.3	109.9	109.5	110.1	110.9
D............	M	170.8	169.8	170.5	170.7	171.5	172.4	169.7	168.5	169.7	169.3	170.2	171.3
Selected local areas[6]													
Chicago–Gary–Kenosha, IL–IN–WI.........	M	177.4	177.9	177.9	178.7	179.8	180.9	171.2	171.7	171.6	172.4	173.5	174.8
Los Angeles–Riverside–Orange County, CA..........	M	178.1	177.1	178.9	180.1	181.1	182.2	170.7	169.7	171.5	172.8	173.8	174.8
New York, NY–Northern NJ–Long Island, NY–NJ–CT–PA..	M	187.8	187.3	188.5	189.9	191.1	191.8	183.3	182.8	183.5	184.7	185.6	186.6
Boston–Brockton–Nashua, MA–NH–ME–CT..........	1	192.7	–	192.9	–	194.7	–	191.9	–	191.8	–	193.2	–
Cleveland–Akron, OH..........	1	172.3	–	171.4	–	173.7	–	164.0	–	162.8	–	164.1	–
Dallas–Ft Worth, TX..........	1	171.5	–	170.6	–	172.1	–	171.1	–	170.0	–	171.4	–
Washington–Baltimore, DC–MD–VA–WV[7]..........	1	110.9	–	110.9	–	111.9	–	110.7	–	110.5	–	111.4	–
Atlanta, GA..........	2	–	174.8	–	176.1	–	178.6	–	172.0	–	173.2	–	175.5
Detroit–Ann Arbor–Flint, MI..........	2	–	173.5	–	176.2	–	179.0	–	167.9	–	170.5	–	173.4
Houston–Galveston–Brazoria, TX..........	2	–	157.1	-	156.6	–	158.8	–	155.2	–	154.3	–	156.8
Miami–Ft. Lauderdale, FL..........	2	–	173.1	–	175.0	–	175.0	–	170.5	–	172.3	–	172.5
Philadelphia–Wilmington–Atlantic City, PA–NJ–DE–MD.....	2	–	179.9	–	182.0	–	183.1	–	179.2	–	181.4	–	182.3
San Francisco–Oakland–San Jose, CA..........	2	–	190.6	–	191.3	–	193.0	–	186.5	–	186.8	–	188.8
Seattle–Tacoma–Bremerton, WA..........	2	–	186.1		187.6		188.8	–	181.1		182.5	–	183.6

[1] Foods, fuels, and several other items priced every month in all areas; most other goods and services priced as indicated:

M—Every month.

1—January, March, May, July, September, and November.

2—February, April, June, August, October, and December.

[2] Regions defined as the four Census regions.

[3] Indexes on a December 1996 = 100 base.

[4] The "North Central" region has been renamed the "Midwest" region by the Census Bureau. It is composed of the same geographic entities.

[5] Indexes on a December 1986 = 100 base.

[6] In addition, the following metropolitan areas are published semiannually and appear in tables 34 and 39 of the January and July issues of the CPI Detailed Report: Anchorage, AK; Cincinnati–Hamilton, OH–KY–IN; Denver–Boulder–Greeley, CO; Honolulu, HI; MO–KS; Milwaukee–Racine, WI; Minneapolis–St. Paul, MN–WI; Pittsburgh, PA; Port-land–Salem, OR–WA; St Louis, MO–IL; San Diego, CA; Tampa–St. Petersburg–Clearwater, FL.

[7] Indexes on a November 1996 = 100 base.

Dash indicates data not available.

NOTE: Local area CPI indexes are byproducts of the national CPI program. Each local index has a smaller sample size and is, therefore, subject to substantially more sampling and other measurement error. As a result, local area indexes show greater volatility than the national index, although their long-term trends are similar. Therefore, the Bureau of Labor Statistics strongly urges users to consider adopting the national average CPI for use in their escalator clauses. Index applies to a month as a whole, not to any specific date.

34. Annual data: Consumer Price Index, U.S. city average, all items and major groups

[1982–84 = 100]

Series	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Consumer Price Index for All Urban Consumers:										
All items:										
Index...	140.3	144.5	148.2	152.4	156.9	160.5	163.0	166.6	172.2	177.1
Percent change..	3.0	3.0	2.6	2.8	3.0	2.3	1.6	2.2	3.4	2.8
Food and beverages:										
Index...	138.7	141.6	144.9	148.9	153.7	157.7	161.1	164.6	168.4	173.6
Percent change..	1.4	2.1	2.3	2.8	3.2	2.6	2.2	2.2	2.3	3.1
Housing:										
Index...	137.5	141.2	144.8	148.5	152.8	156.8	160.4	163.9	169.6	176.4
Percent change..	2.9	2.7	2.5	2.6	2.9	2.6	2.3	2.2	3.5	4.0
Apparel:										
Index...	131.9	133.7	133.4	132.0	131.7	132.9	133.0	131.3	129.6	127.3
Percent change..	2.5	1.4	−.2	−1.0	−.2	.9	.1	−1.3	−1.3	−1.8
Transportation:										
Index...	126.5	130.4	134.3	139.1	143.0	144.3	141.6	144.4	153.3	154.3
Percent change..	2.2	3.1	3.0	3.6	2.8	0.9	−1.9	2.0	6.2	0.7
Medical care:										
Index...	190.1	201.4	211.0	220.5	228.2	234.6	242.1	250.6	260.8	272.8
Percent change..	7.4	5.9	4.8	4.5	3.5	2.8	3.2	3.5	4.1	4.6
Other goods and services:										
Index...	183.3	192.9	198.5	206.9	215.4	224.8	237.7	258.3	271.1	282.6
Percent change..	6.8	5.2	2.9	4.2	4.1	4.4	5.7	8.7	5.0	4.2
Consumer Price Index for Urban Wage Earners and Clerical Workers:										
All items:										
Index...	138.2	142.1	145.6	149.8	154.1	157.6	159.7	163.2	168.9	173.5
Percent change..	2.9	2.8	2.5	2.9	2.9	2.3	1.3	2.2	3.5	2.7

35. Producer Price Indexes, by stage of processing

[1982 = 100]

Grouping	Annual average		2001									2002			
	2000	2001	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Finished goods.................................	138.0	140.7	141.7	142.5	142.1	140.7	141.1	141.7	139.6	139.7	137.2	137.4	137.7	138.9	139.2
Finished consumer goods........................	138.2	141.5	142.7	143.8	143.3	141.5	142.0	142.9	139.9	138.4	136.8	137.2	137.5	139.2	139.4
Finshed consumer foods.....................	137.2	141.3	141.6	141.8	141.9	141.2	142.6	142.9	141.8	140.5	140.4	141.1	142.3	143.7	139.2
Finshed consumer goods excluding foods.............................	138.4	141.4	142.9	144.5	143.7	141.4	141.6	142.7	139.0	137.3	135.1	135.4	135.4	137.2	139.2
Nondurable goods less food.................	138.7	142.8	144.9	147.3	146.5	143.1	143.5	145.1	139.2	136.8	134.0	134.4	134.3	137.0	140.0
Durable goods....................................	133.9	133.9	134.2	133.8	133.2	133.2	133.0	133.2	134.4	134.5	133.9	133.9	134.1	133.7	133.7
Capital equipment...............................	138.8	139.7	140.0	139.7	139.6	139.8	139.5	139.4	139.8	139.9	139.7	139.7	139.8	139.5	139.4
Intermediate materials, supplies, and components.................	129.2	128.7	130.6	131.2	131.4	130.3	129.8	130.1	127.6	126.7	125.4	125.5	125.2	126.5	127.6
Materials and components for manufacturing..............................	128.1	127.4	128.7	128.6	128.3	127.5	126.9	126.6	125.9	125.2	124.7	124.5	124.6	125.3	125.7
Materials for food manufacturing.............	119.2	124.3	122.3	124.6	125.7	126.1	128.1	127.5	126.1	123.9	122.5	122.1	122.6	123.3	122.0
Materials for nondurable manufacturing...	132.6	131.8	135.2	134.2	133.4	131.9	130.1	129.9	128.7	127.4	126.2	125.4	125.4	126.7	128.4
Materials for durable manufacturing........	129.0	125.2	126.0	126.9	126.5	125.3	124.6	124.2	123.4	122.8	122.5	122.5	122.6	123.6	123.7
Components for manufacturing................	126.2	126.3	126.6	126.4	126.4	126.2	126.2	125.9	125.9	125.9	126.0	126.3	126.3	126.5	126.3
Materials and components for construction...............................	150.7	150.6	150.4	151.6	151.7	151.0	151.0	150.8	150.4	150.3	149.0	150.2	150.2	150.5	151.1
Processed fuels and lubricants..................	102.0	104.5	105.9	108.1	110.2	106.8	106.0	108.4	97.4	94.7	89.3	90.0	88.8	92.8	97.0
Containers...	151.6	153.1	153.2	153.9	154.1	153.6	153.2	153.0	152.4	152.2	152.2	152.6	151.9	151.6	151.2
Supplies..	136.9	138.6	139.0	139.0	138.8	138.8	138.7	138.6	138.3	138.3	138.1	138.2	138.1	138.3	138.5
Crude materials for further processing.......................................	120.6	121.3	132.9	130.9	122.8	116.1	113.4	108.0	97.7	104.8	94.8	98.9	98.0	102.3	107.9
Foodstuffs and feedstuffs.......................	100.2	106.2	109.1	110.3	109.7	109.6	108.9	108.5	104.7	98.3	96.4	99.6	102.0	102.9	96.4
Crude nonfood materials.........................	130.4	127.3	144.5	140.4	127.4	116.3	112.4	103.8	89.4	105.5	90.2	95.0	91.4	98.3	113.5
Special groupings:															
Finished goods, excluding foods...............	138.1	140.4	141.6	142.6	142.0	140.5	140.5	141.3	138.8	137.7	136.1	136.3	136.3	137.4	138.7
Finished energy goods...........................	94.1	96.8	101.2	104.1	102.7	97.0	97.8	100.1	90.1	85.5	80.7	81.3	81.3	85.6	89.3
Finished goods less energy.....................	144.9	147.5	147.5	147.7	147.6	147.5	147.7	147.9	147.9	147.7	147.6	147.7	148.1	148.3	147.3
Finished consumer goods less energy.......	147.4	150.8	150.6	151.6	150.9	150.7	151.1	151.4	151.3	151.0	150.9	151.1	151.6	152.0	150.6
Finished goods less food and energy........	148.0	150.0	149.8	150.0	149.9	149.9	149.7	149.8	150.4	150.6	150.4	150.4	150.4	150.2	150.5
Finished consumer goods less food and energy.......................................	154.0	156.9	156.4	156.9	156.7	156.8	156.6	156.8	157.5	157.8	158.0	157.6	157.6	157.4	158.0
Consumer nondurable goods less food and energy.......................................	169.8	175.1	174.0	175.4	175.5	175.5	175.3	175.6	175.8	176.4	176.4	176.4	176.2	176.2	176.2
Intermediate materials less foods and feeds..	130.1	130.5	131.6	132.1	132.3	131.0	130.4	130.7	128.2	127.3	126.0	126.1	125.9	127.1	128.4
Intermediate foods and feeds..................	111.7	115.9	114.0	114.9	116.3	117.1	119.4	118.7	117.3	115.5	114.3	113.6	113.6	114.4	113.7
Intermediate energy goods.....................	101.7	104.1	105.5	107.6	109.7	106.3	105.6	107.9	97.1	94.3	89.0	89.6	88.4	92.4	96.6
Intermediate goods less energy................	135.0	135.1	136.0	136.1	135.9	135.3	134.9	134.7	134.2	133.7	133.4	133.3	133.3	133.8	134.1
Intermediate materials less foods and energy.......................................	136.6	136.4	137.4	137.5	137.2	136.5	136.0	135.8	135.3	134.9	134.6	134.6	134.6	135.1	135.5
Crude energy materials...........................	122.1	122.8	145.2	139.8	123.1	109.0	104.2	93.1	75.2	96.5	76.7	82.8	76.9	87.2	106.7
Crude materials less energy.....................	111.7	112.2	114.3	115.3	114.8	114.3	113.6	113.3	109.8	104.8	103.4	106.2	108.5	108.8	105.3
Crude nonfood materials less energy.........	145.2	130.6	130.8	130.9	130.6	129.4	128.4	128.5	125.8	124.5	124.2	126.1	128.1	126.7	131.4

36. Producer Price Indexes for the net output of major industry groups

[December 1984 = 100, unless otherwise indicated]

SIC	Industry	Annual average		2001										2002		
		2000	2001	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
–	**Total mining industries**.....................................	113.5	114.9	132.2	127.5	115.5	103.4	100.4	92.6	78.8	93.2	78.0	81.6	77.9	86.0	99.9
10	Metal mining..	73.8	70.6	70.0	71.4	71.0	70.4	69.6	70.6	70.4	68.1	67.8	69.7	73.8	71.8	72.4
12	Coal mining (12/85 = 100).............................	84.8	91.3	90.6	92.2	87.7	90.9	89.9	92.5	92.7	95.5	91.8	94.6	91.8	95.3	94.3
13	Oil and gas extraction (12/85 = 100)...............	126.8	128.4	151.5	144.9	129.6	112.9	109.4	98.3	79.7	98.8	79.1	84.0	78.0	90.2	112.1
14	Mining and quarrying of nonmetallic minerals, except fuels........................	137.0	141.0	140.8	140.7	141.8	141.6	141.2	141.4	141.9	141.8	141.4	142.3	143.0	143.1	142.9
–	**Total manufacturing industries**.....................	133.5	134.5	135.4	136.3	136.0	134.6	134.8	135.6	133.6	132.8	131.4	131.7	132.0	132.9	133.8
20	Food and kindred products............................	128.5	132.8	132.5	133.2	133.8	133.9	134.7	134.7	133.9	132.4	131.8	131.5	132.2	132.3	132.0
21	Tobacco manufactures..................................	345.8	386.1	372.1	391.2	391.7	391.1	391.0	391.1	391.1	398.3	398.3	391.7	391.8	392.1	407.9
22	Textile mill products.....................................	116.7	116.9	117.0	117.1	117.2	116.9	116.6	116.5	116.2	116.2	116.1	116.5	115.2	115.5	115.7
23	Apparel and other finished products made from fabrics and similar materials.......	125.7	125.8	125.9	125.8	125.7	125.9	126.1	125.9	125.9	125.9	125.4	125.3	125.3	125.5	125.1
24	Lumber and wood products, except furniture..	158.1	156.1	154.7	160.5	161.3	158.2	157.5	156.9	154.3	153.8	153.3	154.3	154.9	156.9	157.1
25	Furniture and fixtures....................................	143.3	145.1	144.7	144.9	145.2	145.3	145.2	145.3	145.8	145.8	145.5	145.6	145.8	145.9	145.7
26	Paper and allied products..............................	145.8	146.2	147.0	146.9	146.8	146.4	145.4	145.5	145.1	144.4	144.7	144.2	143.4	142.8	143.2
27	Printing, publishing, and allied industries.......	182.9	188.6	188.4	188.8	188.4	188.6	188.9	188.8	189.2	189.6	189.5	192.0	192.3	192.3	192.2
28	Chemicals and allied products.......................	156.7	158.4	161.4	160.4	160.0	158.8	156.3	156.4	156.0	155.4	154.0	153.6	154.5	154.8	156.0
29	Petroleum refining and related products........	112.8	105.3	114.1	120.9	116.9	103.8	106.8	115.4	93.8	87.2	75.3	77.9	79.6	89.0	100.2
30	Rubber and miscellaneous plastics products..	124.6	125.9	127.4	126.6	126.4	126.5	126.0	125.2	125.6	125.3	125.4	125.6	124.5	124.8	124.8
31	Leather and leather products.........................	137.9	141.2	142.8	142.9	142.6	141.9	142.1	141.3	141.0	140.2	140.0	140.3	140.8	140.7	140.5
32	Stone, clay, glass, and concrete products......	134.6	136.0	135.6	136.0	135.7	135.9	135.9	136.4	136.7	137.1	136.8	136.9	136.8	136.2	136.5
33	Primary metal industries...............................	119.8	116.1	116.8	116.9	116.5	116.1	115.8	115.2	114.7	114.3	114.0	113.7	113.5	114.4	114.7
34	Fabricated metal products, except machinery and transportation equipment............................	130.3	131.0	131.2	131.1	131.1	131.1	131.1	131.1	131.0	131.0	131.1	131.1	131.3	131.4	131.4
35	Machinery, except electrical...........................	117.5	117.9	118.0	118.0	118.1	118.1	118.0	117.8	117.7	117.8	117.8	117.8	117.4	117.7	117.6
36	Electrical and electronic machinery, equipment, and supplies.............................	108.3	107.0	107.5	107.4	107.3	106.9	106.4	106.4	106.5	106.6	106.6	107.2	107.1	106.8	106.5
37	Transportation..	136.8	137.8	138.1	137.4	137.1	137.3	137.2	137.2	138.5	138.5	137.9	137.7	137.8	137.9	137.7
38	Measuring and controlling instruments; photographic, medical, and optical goods; watches and clocks....................	126.2	127.2	126.9	127.3	127.4	127.2	127.4	127.5	127.1	127.6	127.8	128.2	128.4	128.4	128.1
39	Miscellaneous manufacturing industries industries (12/85 = 100).............................	130.9	132.3	132.2	132.5	132.5	132.7	132.3	132.6	132.6	132.1	132.3	132.5	132.9	132.9	133.1
	Service industries:															
42	Motor freight transportation and warehousing (06/93 = 100).....................	119.4	123.1	122.7	123.0	123.2	123.3	123.4	123.6	123.8	124.0	123.3	123.4	123.3	123.2	123.8
43	U.S. Postal Service (06/89 = 100)...................	135.2	143.4	141.3	141.3	141.3	145.4	145.4	145.4	145.4	145.4	145.4	145.4	145.4	145.4	145.4
44	Water transportation (12/92 = 100).................	122.6	130.5	125.9	125.6	130.3	131.8	132.0	140.9	134.0	131.2	129.7	129.6	129.5	128.7	128.7
45	Transportation by air (12/92 = 100).................	147.7	157.3	155.4	156.4	156.6	157.6	159.1	158.6	159.8	158.5	155.3	158.0	159.0	164.4	160.2
46	Pipelines, except natural gas (12/92 = 100)....	102.3	110.2	108.9	109.0	109.0	110.9	111.2	111.3	111.5	111.3	111.3	111.2	111.3	111.3	111.3

37. Annual data: Producer Price Indexes, by stage of processing

[1982 = 100]

Index	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Finished goods										
Total..	123.2	124.7	125.5	127.9	131.3	131.8	130.7	133.0	138.0	140.7
Foods..	123.3	125.7	126.8	129.0	133.6	134.5	134.3	135.1	137.2	141.3
Energy..	77.8	78.0	77.0	78.1	83.2	83.4	75.1	78.8	94.1	96.8
Other...	134.2	135.8	137.1	140.0	142.0	142.4	143.7	146.1	148.0	150.0
Intermediate materials, supplies, and components										
Total..	114.7	116.2	118.5	124.9	125.7	125.6	123.0	123.2	129.2	129.7
Foods..	113.9	115.6	118.5	119.5	125.3	123.2	123.2	120.8	119.2	124.3
Energy..	84.3	84.6	83.0	84.1	89.8	89.0	80.8	84.3	101.7	104.1
Other...	122.0	123.8	127.1	135.2	134.0	134.2	133.5	133.1	136.6	136.4
Crude materials for further processing										
Total..	100.4	102.4	101.8	102.7	113.8	111.1	96.8	98.2	120.6	121.3
Foods..	105.1	108.4	106.5	105.8	121.5	112.2	103.9	98.7	100.2	106.2
Energy..	78.8	76.7	72.1	69.4	85.0	87.3	68.6	78.5	122.1	122.8
Other...	94.2	94.1	97.0	105.8	105.7	103.5	84.5	91.1	118.0	101.8

38. U.S. export price indexes by Standard International Trade Classification

[2000 = 100]

SITC Rev. 3	Industry	2001									2002			
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
0	Food and live animals..	101.9	101.2	101.1	101.8	102.6	103.3	102.7	100.9	101.2	102.7	100.0	100.3	100.6
01	Meat and meat preparations...................................	105.2	106.2	106.1	105.7	106.4	107.8	107.8	99.2	97.8	93.1	91.3	93.2	92.0
04	Cereals and cereal preparations.............................	104.2	104.3	102.6	102.2	104.5	106.4	103.9	105.2	107.2	108.4	106.0	105.4	105.2
05	Vegetables, fruit, and nuts, prepared fresh or dry...........	99.8	97.4	98.6	101.7	102.4	100.8	102.1	99.7	100.6	110.5	102.4	102.5	103.7
2	Crude materials, inedible, except fuels........................	94.5	93.3	92.6	92.4	91.1	89.5	87.1	86.3	87.1	87.1	86.9	87.7	89.7
22	Oilseeds and oleaginous fruits................................	89.7	91.0	95.6	102.5	104.3	99.0	89.8	89.1	90.9	91.6	89.4	92.0	93.8
24	Cork and wood..	94.1	93.1	92.8	93.4	92.9	90.2	89.7	88.7	88.0	88.1	87.6	87.2	87.3
25	Pulp and waste paper..	88.2	82.3	80.6	78.2	76.6	77.3	77.7	77.4	77.2	75.8	73.9	74.1	77.1
26	Textile fibers and their waste...................................	93.5	92.5	90.9	90.4	89.3	87.7	84.5	82.0	84.0	85.3	86.6	86.2	86.8
28	Metalliferous ores and metal scrap.............................	92.6	91.6	91.0	87.8	86.2	85.1	82.7	81.4	81.3	84.9	87.0	87.3	91.7
3	Mineral fuels, lubricants, and related products.............	104.8	106.8	103.2	96.7	97.5	103.3	93.4	88.3	82.4	87.1	84.3	89.8	99.7
32	Coal, coke, and briquettes.....................................	106.4	106.6	106.9	106.8	107.9	108.8	108.9	108.9	108.8	109.5	109.7	110.8	111.4
33	Petroleum, petroleum products, and related materials....	102.7	106.1	101.8	93.7	95.2	103.6	88.4	80.9	74.6	80.1	76.5	83.6	95.8
5	Chemicals and related products, n.e.s.	98.1	96.9	96.2	94.9	94.1	93.8	93.8	93.6	92.8	92.2	92.3	93.2	94.7
54	Medicinal and pharmaceutical products......................	99.6	99.5	99.5	100.2	100.8	101.1	100.9	100.9	100.9	101.1	100.8	100.5	100.3
55	Essential oils; polishing and cleaning preparations.........	99.8	99.7	99.7	99.1	99.0	99.1	99.0	98.9	98.8	97.5	97.1	97.6	97.5
57	Plastics in primary forms	96.1	94.9	93.9	91.2	90.0	88.6	89.2	88.5	86.5	85.4	85.8	87.6	89.9
58	Plastics in nonprimary forms...................................	97.6	97.0	97.4	98.0	96.9	97.2	95.9	95.8	95.8	95.9	95.7	95.8	95.1
59	Chemical materials and products, n.e.s.	99.3	98.9	99.1	98.7	98.7	99.0	98.6	98.7	97.6	98.1	97.6	98.0	97.5
6	Manufactured goods classified chiefly by materials.....	99.9	99.7	99.5	99.1	98.4	98.2	97.3	96.6	96.7	97.3	97.2	96.7	97.4
62	Rubber manufactures, n.e.s.	99.7	99.8	99.8	100.5	101.0	101.0	100.6	100.5	100.9	100.4	100.4	100.8	101.1
64	Paper, paperboard, and articles of paper, pulp, and paperboard...	98.1	98.0	97.4	95.1	95.1	95.6	95.1	95.2	95.2	95.3	94.1	92.5	93.1
66	Nonmetallic mineral manufactures, n.e.s.	100.3	100.4	100.8	100.8	101.0	101.1	101.1	101.4	102.1	101.7	101.4	102.1	101.9
68	Nonferrous metals..	101.6	100.0	98.0	97.0	93.0	90.2	86.9	81.8	83.1	85.3	85.9	85.1	86.5
7	Machinery and transport equipment............................	100.5	100.4	100.3	100.2	100.0	100.0	99.7	99.7	99.6	99.3	99.3	99.5	99.5
71	Power generating machinery and equipment.................	102.3	102.3	102.3	102.4	102.8	103.0	103.1	104.1	104.0	104.6	104.4	104.6	104.6
72	Machinery specialized for particular industries..............	100.3	100.3	100.3	99.6	99.5	99.5	100.6	100.5	100.5	100.7	100.8	101.1	101.4
74	General industrial machines and parts, n.e.s., and machine parts...	101.3	101.3	101.3	101.8	101.8	101.9	101.8	101.9	101.7	102.1	102.0	102.2	102.2
75	Computer equipment and office machines....................	97.7	96.9	95.9	95.6	94.8	94.8	94.6	94.2	92.9	92.5	92.9	93.1	92.5
76	Telecommunications and sound recording and reproducing apparatus and equipment......................	99.8	99.7	99.8	99.8	98.7	98.5	98.0	98.0	97.7	97.9	97.5	97.5	97.8
77	Electrical machinery and equipment...........................	98.7	98.7	98.3	97.8	97.7	97.6	95.9	95.9	95.9	94.8	94.6	94.7	94.8
78	Road vehicles...	100.2	100.2	100.2	100.3	100.2	100.2	100.3	100.2	100.3	100.1	100.2	100.3	100.3
87	Professional, scientific, and controlling instruments and apparatus.....................................	100.6	100.8	100.9	100.8	100.8	100.9	101.0	100.9	100.9	100.8	101.1	101.2	101.1

39. U.S. import price indexes by Standard International Trade Classification

[2000 = 100]

SITC Rev. 3	Industry	2001									2002			
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
0	Food and live animals............................	98.4	97.3	96.0	95.1	94.9	95.1	94.7	95.1	94.8	95.8	94.3	96.4	96.9
01	Meat and meat preparations.........................	104.4	106.3	106.2	109.3	108.9	113.5	114.8	118.0	109.8	105.5	107.4	109.8	110.1
03	Fish and crustaceans, mollusks, and other aquatic invertebrates..............................	91.2	90.7	90.0	87.0	86.8	86.3	84.6	82.8	82.9	82.3	82.0	80.4	79.7
05	Vegetables, fruit, and nuts, prepared fresh or dry...........	102.9	101.1	97.6	98.4	98.2	98.5	99.1	101.5	99.3	106.8	98.1	104.0	104.9
07	Coffee, tea, cocoa, spices, and manufactures thereof................	89.6	87.4	85.8	81.2	78.8	80.1	77.3	77.2	78.5	77.5	78.8	83.3	88.5
1	Beverages and tobacco............................	100.6	102.0	101.7	101.7	102.1	1-2.0	102.7	102.6	103.0	102.9	102.9	102.1	102.0
11	Beverages...............................	101.0	102.7	102.4	102.4	102.4	102.4	102.6	102.6	103.1	103.2	103.2	102.5	102.3
2	Crude materials, inedible, except fuels.......................	95.0	98.1	102.8	96.4	95.8	96.6	94.5	91.3	89.9	90.1	92.7	95.8	96.3
24	Cork and wood........................	94.7	104.9	122.1	108.2	109.6	112.2	105.1	97.5	91.7	92.6	98.6	106.6	108.1
25	Pulp and waste paper.........................	98.3	92.4	87.1	83.5	79.3	77.3	76.8	78.0	77.7	78.1	77.2	74.9	73.4
28	Metalliferous ores and metal scrap..................	96.5	95.5	93.9	94.4	93.1	92.8	91.6	89.8	91.2	91.4	92.7	93.7	95.0
29	Crude animal and vegetable materials, n.e.s.	86.5	94.9	92.9	80.8	81.0	83.8	93.4	93.1	96.0	92.2	91.7	92.3	90.5
3	Mineral fuels, lubricants, and related products.............	90.2	93.1	90.4	94.4	85.6	85.8	72.3	65.0	61.2	64.0	65.2	76.4	87.1
33	Petroleum, petroleum products, and related materials....	85.8	90.0	89.3	84.4	86.1	86.8	73.0	63.0	59.8	62.6	65.6	77.4	86.7
34	Gas, natural and manufactured................................	119.0	113.7	97.4	82.8	80.9	77.8	65.7	75.9	68.7	70.8	58.2	64.8	86.0
5	Chemicals and related products, n.e.s.	102.2	101.6	100.5	99.3	98.4	98.3	98.8	97.8	97.5	97.7	96.7	96.3	97.3
52	Inorganic chemicals........................	104.0	101.2	100.1	99.4	98.0	98.1	99.4	98.9	97.6	97.0	97.1	97.8	98.5
53	Dying, tanning, and coloring materials..................	100.8	100.2	98.1	95.6	95.7	96.3	97.1	96.8	97.1	97.8	97.4	97.2	95.6
54	Medicinal and pharmaceutical products....................	96.9	96.7	96.7	99.0	97.3	97.0	97.5	97.3	97.0	97.1	96.3	96.0	96.4
55	Essential oils; polishing and cleaning preparations........	99.0	98.7	98.4	98.1	98.1	99.7	99.8	99.7	100.1	100.1	99.9	99.8	98.9
57	Plastics in primary forms.......................	101.1	101.1	102.1	102.1	100.5	99.7	99.8	99.8	99.8	98.6	97.1	91.5	91.4
58	Plastics in nonprimary forms........................	103.8	103.6	102.4	100.7	100.7	99.3	101.6	101.1	100.9	100.8	100.6	100.6	101.8
59	Chemical materials and products, n.e.s.	100.9	100.1	99.9	99.1	99.0	99.0	99.2	98.6	97.8	96.1	95.2	93.6	94.5
6	Manufactured goods classified chiefly by materials.....	99.1	98.2	98.0	96.8	95.0	94.8	93.8	92.4	92.0	92.4	92.3	92.2	92.6
62	Rubber manufactures, n.e.s.	99.4	99.4	99.0	98.8	98.7	98.7	98.5	97.8	97.9	97.3	97.6	97.6	97.9
64	Paper, paperboard, and articles of paper, pulp, and paperboard...........................	104.7	103.7	102.7	101.7	99.9	99.3	98.6	97.6	96.1	95.0	93.7	93.4	92.5
66	Nonmetallic mineral manufactures, n.e.s.	99.6	99.7	99.4	99.3	99.1	99.3	97.5	97.2	97.5	97.2	97.0	96.9	96.9
68	Nonferrous metals............................	99.6	96.1	95.3	91.0	83.4	82.2	78.7	73.7	73.8	76.4	77.2	76.9	79.2
69	Manufactures of metals, n.e.s.	100.1	100.0	100.1	99.3	99.3	99.3	99.7	99.5	99.0	99.0	98.5	98.5	98.5
7	Machinery and transport equipment........................	98.7	98.5	98.5	98.2	98.1	98.0	98.0	97.9	97.7	97.4	97.2	97.1	97.2
72	Machinery specialized for particular industries...............	99.5	99.2	99.1	98.5	98.6	99.1	99.2	99.0	98.7	98.5	98.5	98.5	98.6
74	General industrial machines and parts, n.e.s., and machine parts........................	98.8	98.3	98.2	98.0	97.8	98.0	98.7	98.1	97.8	98.1	97.5	97.5	97.6
75	Computer equipment and office machines....................	94.1	93.9	93.6	92.1	91.7	90.0	89.1	89.0	88.8	88.6	88.2	88.1	88.2
76	Telecommunications and sound recording and reproducing apparatus and equipment..................	97.3	97.1	97.2	97.3	97.1	96.8	96.5	96.4	96.3	95.7	95.1	94.8	94.8
77	Electrical machinery and equipment..........................	99.3	99.2	98.8	98.9	98.7	98.6	98.7	98.6	97.0	96.9	97.0	96.8	97.0
78	Road vehicles..........................	99.9	99.7	99.8	99.7	88.7	100.0	100.3	100.2	100.3	1,001.0	100.2	100.1	100.2
85	Footwear............................	100.4	100.2	100.1	100.1	100.5	100.4	99.9	99.9	100.3	99.3	99.6	99.5	99.0
88	Photographic apparatus, equipment, and supplies, and optical goods, n.e.s.	98.9	98.8	98.5	97.9	97.9	98.2	98.6	98.5	98.4	97.7	97.3	97.2	97.2

40. U.S. export price indexes by end-use category

[2000 = 100]

Category	2001									2002			
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
ALL COMMODITIES..	99.9	99.6	99.4	99.0	98.8	99.0	98.3	97.8	97.6	97.5	97.3	97.6	98.0
Foods, feeds, and beverages...........................	100.2	99.8	100.4	101.7	102.6	102.6	101.2	99.7	100.6	102.0	98.9	99.5	100.1
Agricultural foods, feeds, and beverages...............	100.6	100.6	101.2	102.4	104.0	103.6	102.2	100.7	101.6	102.6	99.4	99.8	100.7
Nonagricultural (fish, beverages) food products.....	97.0	92.7	92.6	94.8	90.2	92.9	91.9	90.9	90.4	96.3	94.5	96.5	94.0
Industrial supplies and materials...........................	98.7	98.0	97.2	95.5	94.8	95.2	93.6	92.3	91.4	91.5	91.4	91.9	93.5
Agricultural industrial supplies and materials..........	101.7	102.1	99.3	98.5	97.2	96.8	93.8	92.1	93.3	92.3	92.9	93.8	94.4
Fuels and lubricants...	103.9	106.0	102.8	96.9	97.6	103.2	93.6	88.5	83.5	85.6	83.8	85.6	90.4
Nonagricultural supplies and materials, excluding fuel and building materials.................	97.8	96.5	96.1	94.9	94.0	93.8	93.4	92.8	92.3	92.3	92.2	92.7	94.0
Selected building materials..............................	96.8	96.3	97.0	97.0	96.8	95.5	95.1	94.4	94.1	94.4	94.4	94.3	94.1
Capital goods..	100.5	100.4	100.3	100.2	100.0	100.0	99.7	99.7	99.4	99.1	99.2	99.4	99.4
Electric and electrical generating equipment...........	101.3	101.7	101.7	101.8	101.5	101.6	101.6	101.6	101.5	102.1	102.0	102.1	101.9
Nonelectrical machinery....................................	99.5	99.4	99.1	98.9	98.6	98.6	98.2	98.1	97.7	97.2	97.3	97.5	97.5
Automotive vehicles, parts, and engines.................	100.5	100.5	100.4	100.5	100.5	100.4	100.5	100.4	100.5	100.7	100.8	100.9	100.9
Consumer goods, excluding automotive.................	99.5	99.4	99.4	99.5	99.5	99.7	99.7	99.8	99.9	99.5	99.1	99.1	98.9
Nondurables, manufactured...............................	98.9	98.9	99.0	98.9	98.9	99.1	99.0	99.1	99.1	98.2	98.2	98.2	98.2
Durables, manufactured....................................	100.1	99.9	100.0	100.2	100.2	100.4	100.6	100.5	100.5	100.6	99.9	99.6	99.0
Agricultural commodities....................................	100.8	100.8	100.9	101.8	102.8	102.5	100.7	99.2	100.2	100.9	98.3	98.8	99.6
Nonagricultural commodities...............................	99.8	99.5	99.3	98.8	98.5	98.6	98.1	97.7	97.3	97.2	97.2	97.5	97.8

41. U.S. import price indexes by end-use category

[2000 = 100]

Category	2001									2002			
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
ALL COMMODITIES..	97.8	98.0	97.6	96.1	96.0	95.9	93.7	92.3	91.4	91.6	91.6	92.8	94.3
Foods, feeds, and beverages...........................	97.0	96.6	95.4	94.4	94.5	95.0	94.5	95.2	94.6	95.7	93.8	95.0	95.9
Agricultural foods, feeds, and beverages...............	98.9	98.4	97.0	96.7	96.9	97.8	97.8	99.5	98.3	99.8	97.2	99.5	100.9
Nonagricultural (fish, beverages) food products.....	3.1	92.9	92.2	89.7	89.5	89.2	87.8	86.4	86.8	87.0	86.8	85.5	85.1
Industrial supplies and materials...........................	95.4	96.5	95.5	91.4	91.0	91.0	84.3	79.9	77.6	79.1	79.8	84.9	90.3
Fuels and lubricants...	90.4	93.4	90.9	84.8	86.0	86.1	72.9	65.7	61.6	64.5	65.9	76.4	87.1
Petroleum and petroleum products...................	86.2	90.3	89.4	84.6	86.1	86.7	73.4	63.6	59.9	63.0	65.7	76.9	86.7
Paper and paper base stocks............................	104.6	102.2	100.0	98.0	95.1	93.9	93.1	92.3	90.7	90.0	88.8	88.0	87.0
Materials associated with nondurable supplies and materials.................................	102.2	101.4	100.3	98.6	98.0	97.9	98.0	96.7	96.2	96.3	96.0	95.9	97.4
Selected building materials................................	93.9	100.1	111.1	103.0	102.9	103.7	99.9	96.1	92.9	93.1	96.1	100.7	101.0
Unfinished metals associated with durable goods..	96.9	94.2	93.6	91.4	87.4	87.1	85.1	82.1	82.1	83.2	83.8	83.8	86.2
Nonmetals associated with durable goods.............	101.2	100.9	100.6	100.1	100.2	100.4	99.9	98.9	99.0	98.4	97.7	97.2	97.6
Capital goods..	98.0	97.8	97.7	97.3	97.1	96.8	96.7	96.5	96.2	95.7	95.4	95.2	95.2
Electric and electrical generating equipment...........	101.6	101.8	101.8	101.6	101.3	101.4	101.4	101.2	100.6	97.3	96.7	95.5	95.3
Nonelectrical machinery....................................	97.1	96.9	96.7	96.2	96.0	95.6	95.4	95.3	94.9	94.8	94.5	94.4	94.5
Automotive vehicles, parts, and engines.................	100.0	99.8	99.8	99.7	99.6	99.9	100.1	100.0	100.1	99.8	100.1	99.9	100.1
Consumer goods, excluding automotive.................	99.5	99.5	99.3	99.2	99.2	99.1	98.9	98.8	98.7	98.7	98.4	98.2	98.1
Nondurables, manufactured...............................	100.1	100.0	99.8	100.0	100.0	99.6	99.6	99.6	99.7	99.8	99.7	99.2	99.1
Durables, manufactured....................................	99.1	99.0	98.9	98.6	98.6	98.7	98.4	98.3	98.0	97.8	97.4	97.3	97.3
Nonmanufactured consumer goods.....................	98.2	99.6	99.2	97.6	97.4	97.9	95.8	95.7	96.4	95.8	95.7	96.1	95.8

42. U.S. international price indexes for selected categories of services

[2000 = 100]

Category	2000				2001				2002
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.
Air freight (inbound).................................	100.7	100.1	100.2	99.0	97.9	95.1	94.9	95.2	93.8
Air freight (outbound)...............................	99.2	100.3	100.2	100.2	100.1	98.0	97.6	97.9	95.3
Air passenger fares (U.S. carriers)...........................	95.8	101.2	103.1	99.9	101.9	106.4	107.6	103.5	103.3
Air passenger fares (foreign carriers)........................	97.1	102.1	103.2	97.6	100.7	103.8	110.2	100.8	99.4
Ocean liner freight (inbound).................................	96.6	101.3	101.1	101.0	102.8	100.8	98.1	93.6	91.7

43. Indexes of productivity, hourly compensation, and unit costs, quarterly data seasonally adjusted

[1992 = 100]

Item	1999				2000				2001				2002
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I
Business													
Output per hour of all persons	112.7	112.4	113.3	115.3	115.3	117.5	117.8	118.7	118.6	119.3	119.5	121.1	123.6
Compensation per hour	123.1	124.4	126.1	127.3	129.3	132.1	134.3	137.4	139.1	140.9	142.1	142.9	143.8
Real compensation per hour	106.6	106.9	107.5	107.7	108.4	110.0	110.8	112.5	112.8	113.4	114.1	114.9	115.6
Unit labor costs	109.2	110.7	111.3	110.4	112.2	113.5	114.0	115.8	117.3	118.1	118.9	119.1	116.4
Unit nonlabor payments	114.5	112.6	112.3	114.8	114.2	115.1	113.8	112.0	111.7	111.5	111.7	112.0	114.8
Implicit price deflator	111.2	111.4	111.7	112.0	112.9	113.5	113.9	114.4	115.2	115.7	116.2	115.8	115.8
Nonfarm business													
Output per hour of all persons	112.2	111.8	112.7	113.8	113.8	116.7	117.2	117.8	117.8	118.4	118.7	120.2	115.8
Compensation per hour	122.2	123.5	125.1	126.6	128.7	131.2	133.6	136.5	138.1	139.7	141.0	141.8	122.8
Real compensation per hour	105.8	106.1	106.8	107.1	107.9	109.2	110.2	111.8	112.0	112.4	113.2	114.0	142.7
Unit labor costs	109.0	110.4	111.1	110.2	112.1	112.5	114.0	115.8	117.2	118.0	118.7	117.9	114.7
Unit nonlabor payments	116.0	114.2	114.0	116.5	115.9	116.7	115.3	113.4	113.1	112.9	112.9	113.9	116.2
Implicit price deflator	111.5	111.8	112.1	112.5	113.5	114.0	114.5	114.9	115.7	116.1	116.1	116.4	116.4
Nonfinancial corporations													
Output per hour of all employees	114.5	114.7	115.4	116.4	117.2	118.8	119.6	119.8	119.9	120.9	121.2	124.4	–
Compensation per hour	119.1	120.4	121.9	123.2	125.0	127.6	129.7	132.7	134.5	136.5	138.1	139.4	–
Real compensation per hour	103.1	103.5	104.0	104.2	104.8	106.1	107.0	108.7	109.1	109.9	110.9	112.5	–
Total unit costs	103.7	104.5	105.4	105.6	106.5	107.1	108.1	110.0	111.4	112.5	114.0	111.9	–
Unit labor costs	104.1	104.9	105.6	105.8	106.6	107.4	108.5	110.8	112.2	112.9	114.0	112.0	–
Unit nonlabor costs	102.8	103.4	105.0	105.1	106.2	106.5	107.1	107.8	109.3	111.2	114.2	111.6	–
Unit profits	141.6	135.4	128.0	131.3	135.1	139.3	135.8	120.5	111.1	107.4	99.6	111.6	–
Unit nonlabor payments	112.7	111.6	110.8	111.8	113.6	114.8	114.4	111.0	109.8	110.2	110.4	111.6	–
Implicit price deflator	106.9	107.1	107.4	107.8	108.9	109.8	110.5	110.9	111.4	112.0	112.8	111.9	–
Manufacturing													
Output per hour of all persons	127.6	128.3	129.6	132.7	135.2	137.2	138.3	.2' 138.3	138.3	138.1	139.0	140.4	143.9
Compensation per hour	119.8	121.2	123.0	124.5	126.3	128.6	131.9	135.9	137.9	140.0	141.2	142.0	142.9
Real compensation per hour	103.7	104.2	104.9	105.4	105.9	107.0	108.8	111.3	111.8	112.6	113.4	114.2	114.9
Unit labor costs	93.9	94.4	94.9	93.8	93.4	93.8	95.4	97.6	99.7	101.3	101.5	101.2	99.3

44. Annual indexes of multifactor productivity and related measures, selected years

[1996 = 100, unless otherwise indicated]

Item	1960	1970	1980	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Private business													
Productivity:													
Output per hour of all persons...............................	45.6	63.0	75.8	90.2	91.3	94.8	95.4	96.6	97.3	100.0	102.0	104.8	104.8
Output per unit of capital services.........................	110.4	111.1	101.5	99.3	96.1	97.7	98.5	100.3	99.7	100.0	100.5	100.1	100.1
Multifactor productivity....................................	65.2	80.0	88.3	95.3	94.4	96.6	97.1	98.1	98.4	100.0	101.1	102.6	102.6
Output..	27.5	42.0	59.4	83.6	82.6	85.7	88.5	92.8	95.8	100.0	105.2	110.6	110.6
Inputs:													
Labor input...	54.0	61.0	71.9	89.4	88.3	89.3	91.8	95.6	98.0	100.0	103.7	106.4	106.4
Capital services...	24.9	37.8	58.6	84.2	86.0	87.7	89.8	92.6	96.0	100.0	104.7	110.4	110.4
Combined units of labor and capital input................	42.3	52.4	67.3	87.7	87.5	88.8	91.1	94.6	97.3	100.0	104.0	107.7	107.7
Capital per hour of all persons..............................	41.3	56.7	74.7	90.8	95.0	97.0	96.8	96.3	97.6	100.0	101.5	104.7	104.7
Private nonfarm business													
Productivity:													
Output per hour of all persons...............................	48.7	64.9	77.3	90.3	91.4	94.8	95.3	96.5	97.5	100.0	101.7	104.5	104.5
Output per unit of capital services.........................	120.1	118.3	105.7	100.0	96.6	97.9	98.8	100.3	99.9	100.0	100.2	99.8	99.8
Multifactor productivity....................................	69.1	82.6	90.5	95.6	94.7	96.6	97.1	98.1	98.6	100.0	100.9	102.4	102.4
Output..	27.2	41.9	59.6	83.5	82.5	85.5	88.4	92.6	95.8	100.0	105.1	110.6	110.6
Inputs:													
Labor input...	50.1	59.3	70.7	89.2	88.0	89.0	91.8	95.4	97.8	100.0	103.8	106.6	106.6
Capital services...	22.6	35.5	56.4	83.5	85.4	87.3	89.5	92.3	95.9	100.0	104.9	110.8	110.8
Combined units of labor and capital input................	39.3	50.7	65.9	87.3	87.1	88.4	91.0	94.4	97.2	100.0	104.2	108.0	108.0
Capital per hour of all persons..............................	40.5	54.8	73.1	90.3	94.7	96.8	96.5	96.3	97.6	100.0	101.5	104.7	104.7
Manufacturing (1992 = 100)													
Productivity:													
Output per hour of all persons...............................	41.8	54.2	70.1	92.8	95.0	100.0	101.9	105.0	109.0	112.8	117.1	124.3	124.3
Output per unit of capital services.........................	124.3	116.5	100.9	101.6	97.5	100.0	101.1	104.0	105.0	104.5	105.6	106.5	106.5
Multifactor productivity....................................	72.7	84.4	86.6	99.3	98.3	100.0	100.4	102.6	105.0	106.1	109.8	113.2	113.2
Output..	38.5	56.5	75.3	97.3	95.4	100.0	103.3	108.7	113.4	116.9	123.5	130.7	130.7
Inputs:													
Hours of all persons.....................................	92.0	104.2	107.5	104.8	100.4	100.0	101.4	103.6	104.0	103.7	105.5	105.2	105.2
Capital services...	30.9	48.5	74.7	95.8	97.9	100.0	102.2	104.5	108.0	111.9	116.9	122.8	122.8
Energy..	51.3	85.4	92.5	99.9	100.1	100.0	103.7	107.3	109.5	107.0	103.9	109.2	109.2
Nonenergy materials.....................................	38.2	44.8	75.0	92.5	93.6	100.0	105.7	111.3	112.8	120.4	120.4	127.2	127.2
Purchased business services...........................	28.2	48.8	73.7	92.5	92.1	100.0	103.0	105.1	110.0	108.9	114.2	116.8	116.8
Combined units of all factor inputs......................	52.9	67.0	87.0	98.0	97.0	100.0	102.9	106.0	107.9	110.2	112.5	115.5	115.5

45. Annual indexes of productivity, hourly compensation, unit costs, and prices, selected years

[1992 = 100]

Item	1960	1970	1980	1990	1993	1994	1995	1996	1997	1998	1999	2000	2001
Business													
Output per hour of all persons....................................	48.8	67.0	80.4	95.2	100.5	101.9	102.6	105.4	107.8	110.8	113.8	116.9	119.6
Compensation per hour...	13.7	23.5	54.2	90.7	102.5	104.5	106.7	110.1	113.5	119.6	125.1	132.8	141.2
Real compensation per hour....................................	60.0	78.9	89.4	96.5	99.9	99.7	99.3	99.7	100.6	104.6	107.1	110.1	114.2
Unit labor costs...	28.0	35.1	67.4	95.3	101.9	102.6	104.1	104.5	105.3	108.0	109.9	113.6	118.1
Unit nonlabor payments..	25.2	31.6	61.5	93.9	102.5	106.4	109.4	113.3	117.1	115.1	115.1	113.9	111.8
Implicit price deflator...	27.0	33.9	65.2	94.8	102.2	104.0	106.0	107.7	109.7	110.6	111.8	113.7	115.8
Nonfarm business													
Output per hour of all persons....................................	51.9	68.9	82.0	95.3	100.5	101.8	102.8	105.4	107.5	110.4	113.2	116.2	118.8
Compensation per hour...	14.3	23.7	54.6	90.5	102.2	104.3	106.6	109.8	113.1	119.0	124.2	132.0	140.1
Real compensation per hour....................................	62.8	79.5	90.0	96.3	99.6	99.5	99.2	99.4	100.2	104.0	106.4	109.4	113.3
Unit labor costs...	27.5	34.4	66.5	95.0	101.7	102.5	103.7	104.2	105.2	107.7	109.7	113.6	117.9
Unit nonlabor payments..	24.6	31.3	60.5	93.6	103.0	106.9	110.4	113.5	118.0	116.3	116.8	115.4	113.3
Implicit price deflator...	26.5	33.3	64.3	94.5	102.2	104.1	106.1	107.6	109.8	110.8	112.3	114.2	116.2
Nonfinancial corporations													
Output per hour of all employees...............................	55.4	70.4	81.1	95.4	100.7	103.1	104.2	107.5	108.4	112.3	116.2	119.9	121.6
Compensation per hour...	15.6	25.3	56.4	90.8	102.0	104.2	106.2	109.0	110.3	115.9	121.1	128.3	137.1
Real compensation per hour....................................	68.3	84.7	93.1	96.7	99.5	99.4	98.8	98.7	97.8	101.3	103.7	106.4	110.9
Total unit costs...	26.8	34.8	68.4	95.9	101.0	101.1	102.0	101.2	101.5	102.6	103.7	106.7	112.4
Unit labor costs...	28.1	35.9	69.6	95.2	101.3	101.0	101.9	101.4	101.8	103.2	104.2	107.0	112.8
Unit nonlabor costs...	23.3	31.9	65.1	98.0	100.2	101.3	102.2	100.6	100.9	101.2	102.5	105.6	111.6
Unit profits..	50.2	44.4	68.8	94.3	113.2	131.7	139.0	152.2	156.9	148.9	147.6	131.0	107.4
Unit nonlabor payments.......................................	30.2	35.1	66.0	97.1	103.5	109.0	111.6	113.8	115.2	113.4	114.0	112.1	110.5
Implicit price deflator...	28.8	35.6	68.4	95.8	102.1	103.7	105.1	105.5	106.2	106.6	107.4	108.7	112.0
Manufacturing													
Output per hour of all persons....................................	41.8	54.2	70.1	92.8	101.9	105.0	109.0	112.8	117.1	124.3	129.6	137.5	139.0
Compensation per hour...	14.9	23.7	55.6	90.8	102.7	105.6	107.9	109.3	111.4	117.3	122.0	130.7	140.2
Real compensation per hour....................................	65.2	79.5	91.7	96.6	100.2	100.8	100.4	99.0	98.8	102.6	104.5	108.8	113.4
Unit labor costs...	35.6	43.8	79.3	97.8	100.8	100.7	99.0	96.9	95.1	94.4	94.1	95.1	100.9
Unit nonlabor payments..	26.8	29.3	80.2	99.7	100.9	102.8	106.9	109.9	109.6	104.4	105.5	–	–
Implicit price deflator...	30.2	34.9	79.8	99.0	100.9	102.0	103.9	104.9	104.0	100.5	101.1	–	–

Dash indicates data not available.

46. Annual indexes of output per hour for selected 3-digit SIC industries

[1987=100]

Industry	SIC	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Mining												
Copper ores...........................	102	102.7	100.5	115.2	118.1	126.0	117.2	116.5	118.9	118.3	110.0	122.6
Gold and silver ores...................	104	122.3	127.4	141.6	159.8	160.8	144.2	138.3	158.5	187.6	197.5	239.9
Bituminous coal and lignite mining......	122	118.7	122.4	133.0	141.2	148.1	155.9	168.0	176.6	188.0	194.9	207.0
Crude petroleum and natural gas.........	131	97.0	97.9	102.1	105.9	112.4	119.4	123.9	125.2	127.5	134.5	142.5
Crushed and broken stone...............	142	102.2	99.8	105.0	103.6	108.7	105.4	107.2	112.6	110.2	105.0	101.9
Manufacturing												
Meat products.........................	201	97.1	99.6	104.6	104.3	101.2	102.3	97.4	102.5	102.3	101.8	102.9
Dairy products........................	202	107.3	108.3	111.4	109.6	111.8	116.4	116.0	119.3	119.3	112.7	113.5
Preserved fruits and vegetables........	203	95.6	99.2	100.5	106.8	107.6	109.1	109.2	110.7	117.8	120.4	123.5
Grain mill products...................	204	105.4	104.9	107.8	109.2	108.4	115.4	108.0	118.2	126.2	129.3	127.5
Bakery products.......................	205	92.7	90.6	93.8	94.4	96.4	97.3	95.6	99.1	100.9	106.4	107.6
Sugar and confectionery products.......	206	103.2	102.0	99.8	104.5	106.2	108.3	113.7	116.7	123.0	127.0	130.5
Fats and oils.........................	207	118.1	120.1	114.1	112.6	111.8	120.3	110.1	120.2	137.3	154.4	151.4
Beverages.............................	208	117.0	120.0	127.1	126.4	130.1	133.5	135.0	135.5	136.4	129.7	128.6
Miscellaneous food and kindred products.	209	99.2	101.7	101.5	105.2	100.9	102.9	109.1	104.0	112.4	113.9	116.3
Cigarettes............................	211	113.2	107.6	111.6	106.5	126.6	142.9	147.2	147.2	152.2	137.7	139.1
Broadwoven fabric mills, cotton........	221	103.1	111.2	110.3	117.8	122.1	134.0	137.3	131.2	136.2	139.3	140.2
Broadwoven fabric mills, manmade.......	222	111.3	116.2	126.2	131.7	142.5	145.3	147.6	162.2	168.6	175.3	167.4
Narrow fabric mills...................	224	96.5	99.6	112.9	111.4	120.1	118.9	126.3	110.8	117.7	124.9	117.1
Knitting mills........................	225	107.5	114.0	119.3	127.9	134.1	138.3	150.3	138.0	135.9	146.6	155.6
Textile finishing, except wool........	226	83.4	79.9	78.6	79.3	81.2	78.5	79.2	94.3	93.7	94.4	97.2
Carpets and rugs......................	227	93.2	89.2	96.1	97.1	93.3	95.8	100.2	100.3	102.3	96.0	103.0
Yarn and thread mills.................	228	110.2	111.4	119.6	126.6	130.7	137.4	147.4	150.4	153.0	157.6	155.4
Miscellaneous textile goods...........	229	109.2	104.6	106.5	110.4	118.5	123.7	123.1	118.7	120.1	128.0	134.4
Men's and boys' furnishings...........	232	102.1	108.4	109.1	108.4	111.7	123.4	134.7	162.1	174.8	190.9	200.3
Women's and misses' outerwear.........	233	104.1	104.3	109.4	121.8	127.4	135.5	141.6	149.9	151.9	173.9	189.9
Women's and children's undergarments...	234	102.1	113.7	117.4	124.5	138.0	161.3	174.5	208.9	216.4	294.7	352.3
Hats, caps, and millinery.............	235	89.2	91.1	93.6	87.2	77.7	84.3	82.2	87.1	98.7	99.3	106.1
Miscellaneous apparel and accessories..	238	90.6	91.8	91.3	94.0	105.5	116.8	120.1	101.5	108.0	105.8	111.3
Miscellaneous fabricated textile products	239	99.9	100.7	107.5	108.5	107.8	109.2	105.6	119.2	117.3	128.8	132.5
Sawmills and planing mills............	242	99.8	102.6	108.1	101.9	103.3	110.2	115.6	116.9	118.7	125.4	124.4
Millwork, plywood, and structural members.	243	98.0	98.0	99.9	97.0	94.5	92.7	92.4	89.1	91.3	89.2	91.4
Wood containers.......................	244	111.2	113.1	109.4	100.1	100.9	106.1	106.7	106.2	106.5	103.9	104.6
Wood buildings and mobile homes.......	245	103.1	103.0	103.1	103.8	98.3	97.0	96.7	100.3	99.2	100.3	94.6
Miscellaneous wood products...........	249	107.7	110.5	114.2	115.3	111.8	115.4	114.4	123.4	131.2	140.7	146.5
Household furniture...................	251	104.5	107.1	110.5	110.6	112.5	116.9	121.6	121.3	125.7	128.9	128.4
Office furniture......................	252	95.0	94.1	102.5	103.2	100.5	101.1	106.4	118.3	113.1	108.9	111.2
Public building and related furniture..	253	119.8	120.2	140.6	161.0	157.4	173.3	181.5	214.9	207.6	222.4	202.0
Partitions and fixtures...............	254	95.6	93.0	102.7	107.4	98.9	101.2	97.5	121.1	125.6	125.9	131.9
Miscellaneous furniture and fixtures...	259	103.5	102.1	99.5	103.6	104.7	110.0	113.2	110.7	121.9	119.1	110.5
Pulp mills............................	261	116.7	128.3	137.3	122.5	128.9	131.9	132.6	82.3	86.6	84.8	78.8
Paper mills...........................	262	102.3	99.2	103.3	102.4	110.2	118.6	111.6	112.0	114.8	126.2	133.5
Paperboard mills......................	263	100.6	101.4	104.4	108.4	114.9	119.5	118.0	126.7	127.8	134.9	135.3
Paperboard containers and boxes.......	265	101.3	103.4	105.2	107.9	108.4	105.1	106.3	109.7	113.5	111.9	112.9
Miscellaneous converted paper products.	267	101.4	105.3	105.5	107.9	110.6	113.3	113.6	119.5	123.0	126.0	128.3
Newspapers............................	271	90.6	85.8	81.5	79.4	79.9	79.0	77.4	79.0	83.6	86.0	88.3
Periodicals...........................	272	93.9	89.5	92.9	89.5	81.9	87.8	89.1	100.1	112.2	111.2	109.9
Books.................................	273	96.6	100.8	97.7	103.5	103.0	101.6	99.3	102.6	100.9	106.1	106.1
Miscellaneous publishing..............	274	92.2	95.9	105.8	104.5	97.5	94.8	93.6	114.5	119.4	127.2	127.8
Commercial printing...................	275	102.5	102.0	108.0	106.9	106.5	107.2	108.3	108.8	109.9	115.0	118.7
Manifold business forms...............	276	93.0	89.1	94.5	91.1	82.0	76.9	75.2	77.9	76.7	70.6	69.4
Greeting cards........................	277	100.6	92.7	96.7	91.4	89.0	92.5	90.8	92.2	104.1	109.3	105.1
Blankbooks and bookbinding............	278	99.4	96.1	103.6	98.7	105.4	108.7	114.5	114.2	116.5	123.8	126.2
Printing trade services...............	279	99.3	100.6	112.0	115.3	111.0	116.7	126.2	123.3	126.7	121.5	119.6
Industrial inorganic chemicals........	281	106.8	109.7	109.7	105.6	102.3	109.3	110.1	116.8	145.8	148.5	141.3
Plastics materials and synthetics.....	282	100.9	100.0	107.5	112.0	125.3	128.3	125.3	135.4	142.2	148.6	151.0
Drugs.................................	283	103.8	104.5	99.5	99.7	104.6	108.7	112.5	112.4	104.3	105.6	106.2
Soaps, cleaners, and toilet goods.....	284	103.8	105.3	104.4	108.7	111.2	118.6	120.9	126.4	122.7	114.8	124.8
Paints and allied products............	285	106.3	104.3	102.9	108.8	116.7	118.0	125.6	126.4	126.8	122.7	124.6
Industrial organic chemicals..........	286	101.4	95.8	94.6	92.2	99.9	98.6	99.0	111.3	105.7	120.6	127.8
Agricultural chemicals................	287	104.7	99.5	99.5	103.8	105.0	108.5	110.0	119.8	118.0	104.6	112.0

See footnotes at end of table.

46. Continued - Annual indexes of output per hour for selected 3-digit SIC industries

[1987=100]

Industry	SIC	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Miscellaneous chemical products........................	289	97.3	96.1	101.8	107.1	105.7	107.8	110.1	120.3	120.8	123.3	125.6
Petroleum refining..	291	109.2	106.6	111.3	120.1	123.8	132.3	142.0	149.2	155.8	170.2	180.2
Asphalt paving and roofing materials..................	295	98.0	94.1	100.4	108.0	104.9	111.2	113.1	123.1	124.7	123.4	126.1
Miscellaneous petroleum and coal products.........	299	94.8	90.6	101.5	104.2	96.3	87.4	87.1	96.5	98.5	86.5	82.9
Tires and inner tubes......................................	301	103.0	102.4	107.8	116.5	124.1	131.1	138.8	149.1	144.1	142.1	145.9
Hose and belting and gaskets and packing..........	305	96.1	92.4	97.8	99.7	102.7	104.6	107.4	113.5	112.7	110.6	115.4
Fabricated rubber products, n.e.c.....................	306	109.0	109.9	115.2	123.1	119.1	121.5	121.0	125.3	132.3	136.9	144.7
Miscellaneous plastics products, n.e.c...............	308	105.7	108.3	114.4	116.7	120.8	121.0	124.7	129.9	133.8	140.9	145.4
Footwear, except rubber................................	314	101.1	94.4	104.2	105.2	113.0	117.1	126.1	121.4	110.9	132.6	146.2
Flat glass..	321	84.5	83.6	92.7	97.7	97.6	99.6	101.5	107.6	114.0	129.4	140.4
Glass and glassware, pressed or blown..............	322	104.8	102.3	108.9	108.7	112.9	115.7	121.4	128.3	135.2	139.3	135.8
Products of purchased glass............................	323	92.6	97.7	101.5	106.2	105.9	106.1	122.0	125.1	122.0	130.2	137.2
Cement, hydraulic..	324	112.4	108.3	115.1	119.9	125.6	124.3	128.7	133.1	134.1	138.6	136.9
Structural clay products................................	325	109.6	109.8	111.4	106.8	114.0	112.6	119.6	111.9	114.8	123.5	124.8
Pottery and related products...........................	326	98.7	95.9	99.5	100.3	108.5	109.4	119.4	124.2	127.4	122.0	121.2
Concrete, gypsum, and plaster products............	327	102.3	101.2	102.5	104.6	101.5	104.5	107.3	107.6	112.8	111.1	105.1
Miscellaneous nonmetallic mineral products........	329	95.4	94.0	104.3	104.5	106.3	107.8	110.4	114.7	114.9	113.3	116.1
Blast furnace and basic steel products...............	331	109.7	107.8	117.0	133.6	142.4	142.6	147.5	155.0	151.0	155.6	160.1
Iron and steel foundries................................	332	106.1	104.5	107.2	112.1	113.0	112.7	116.2	120.8	121.1	128.9	132.1
Primary nonferrous metals.............................	333	102.3	110.7	101.9	107.9	105.3	111.0	110.8	112.0	118.9	117.7	111.9
Nonferrous rolling and drawing........................	335	92.7	91.0	96.0	98.3	101.2	99.2	104.0	111.3	115.7	121.4	118.0
Nonferrous foundries (castings)......................	336	104.0	103.6	103.6	108.5	112.1	117.8	122.3	127.0	131.5	129.8	129.7
Miscellaneous primary metal products................	339	113.7	109.1	114.5	111.3	134.5	152.2	149.6	136.2	140.0	149.0	154.3
Metal cans and shipping containers..................	341	117.6	122.9	127.8	132.3	140.9	144.2	155.2	160.3	163.8	157.9	159.5
Cutlery, handtools, and hardware.....................	342	97.3	96.8	100.1	104.0	109.2	111.3	118.2	114.6	115.7	121.9	125.4
Plumbing and heating, except electric...............	343	102.6	102.0	98.4	102.0	109.1	109.2	118.6	127.3	130.5	125.7	132.2
Fabricated structural metal products.................	344	98.8	100.0	103.9	104.8	107.7	105.8	106.5	111.9	112.7	112.8	112.8
Metal forgings and stampings.........................	346	95.6	92.9	103.7	108.7	108.5	109.3	113.6	120.2	125.9	128.3	129.8
Metal services, n.e.c...................................	347	104.7	99.4	111.6	120.6	123.0	127.7	128.4	124.4	127.3	126.1	135.7
Ordnance and accessories, n.e.c.....................	348	82.1	81.5	88.6	84.6	83.6	87.6	87.5	93.7	96.6	91.0	92.8
Miscellaneous fabricated metal products............	349	97.5	97.4	101.1	102.0	103.2	106.6	108.3	107.7	111.6	109.3	109.2
Engines and turbines....................................	351	106.5	105.8	103.3	109.2	122.3	122.7	136.6	136.9	146.1	151.5	164.5
Farm and garden machinery...........................	352	116.5	112.9	113.9	118.6	125.0	134.7	137.2	141.2	148.5	128.6	139.6
Construction and related machinery..................	353	107.0	99.1	102.0	108.2	117.7	122.1	123.3	132.5	137.6	133.6	139.8
Metalworking machinery................................	354	101.1	96.4	104.3	107.4	109.9	114.8	114.9	119.2	119.8	123.0	129.8
Special industry machinery............................	355	107.5	108.3	106.0	113.6	121.2	132.3	134.0	131.7	124.5	138.6	172.2
General industrial machinery..........................	356	101.5	101.6	101.6	104.8	106.7	109.0	109.4	110.0	111.2	113.1	118.7
Computer and office equipment.......................	357	138.1	149.6	195.7	258.6	328.6	469.4	681.3	960.2	1356.6	1862.5	2172.0
Refrigeration and service machinery.................	358	103.6	100.7	104.9	108.6	110.7	112.7	114.7	115.0	121.4	124.0	122.3
Industrial machinery, n.e.c............................	359	107.3	109.0	117.0	118.5	127.4	138.8	141.4	129.3	127.5	135.8	141.8
Electric distribution equipment.......................	361	106.3	106.5	119.6	122.2	131.8	143.0	143.9	142.8	147.5	148.9	155.4
Electrical industrial apparatus........................	362	107.7	107.1	117.1	132.9	134.9	150.8	154.3	164.2	162.3	158.3	157.0
Household appliances....................................	363	105.8	106.5	115.0	123.4	131.4	127.3	127.4	142.9	150.2	149.5	162.4
Electric lighting and wiring equipment...............	364	99.9	97.5	105.7	107.8	113.4	113.7	116.9	121.8	129.2	132.4	134.8
Communications equipment............................	366	123.8	129.1	154.9	163.1	186.4	200.7	229.5	275.4	284.5	371.9	448.8
Electronic components and accessories.............	367	133.4	154.7	189.3	217.9	274.0	401.5	515.0	613.4	768.6	1062.6	1440.1
Miscellaneous electrical equipment & supplies...	369	90.6	98.6	101.3	108.2	110.5	114.1	123.1	128.3	135.3	147.2	156.0
Motor vehicles and equipment.........................	371	102.4	96.6	104.2	106.2	108.8	106.7	107.2	116.3	125.2	136.7	127.1
Aircraft and parts..	372	98.9	108.2	112.3	115.2	109.5	107.8	113.1	114.7	140.1	138.1	132.2
Ship and boat building and repairing..................	373	103.7	96.3	102.7	105.9	103.8	98.1	99.3	105.5	102.5	113.1	121.6
Railroad equipment......................................	374	141.1	146.9	147.9	151.0	152.5	150.0	148.3	184.2	189.1	212.8	218.4
Motorcycles, bicycles, and parts.....................	375	93.8	99.8	108.4	130.9	125.1	120.3	125.5	120.4	127.7	122.4	119.4
Guided missiles, space vehicles, parts..............	376	116.5	110.5	110.5	119.4	114.9	116.9	125.1	133.6	138.9	156.1	113.3
Search and navigation equipment.....................	381	112.7	118.9	122.1	129.1	132.1	149.5	142.2	149.5	149.1	149.6	163.7
Measuring and controlling devices....................	382	106.4	113.1	119.9	124.0	133.8	146.4	150.5	142.4	143.5	152.4	158.5
Medical instruments and supplies....................	384	116.9	118.7	123.5	127.3	126.7	131.5	139.8	147.4	158.6	160.4	167.0
Ophthalmic goods..	385	121.2	125.1	144.5	157.8	160.6	167.2	188.2	196.3	199.0	235.2	250.2
Photographic equipment & supplies..................	386	107.8	110.2	116.4	126.9	132.7	129.5	128.7	121.5	128.0	160.6	169.4
Jewelry, silverware, and plated ware.................	391	99.3	95.8	96.7	96.7	99.5	100.2	102.6	114.2	113.1	134.3	144.9
Musical instruments.....................................	393	97.1	96.9	96.0	95.6	88.7	86.9	78.8	82.9	81.4	97.1	105.3

See footnotes at end of table.

46. Continued - Annual indexes of output per hour for selected 3-digit SIC industries

[1987=100]

Industry	SIC	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Toys and sporting goods.............................	394	108.1	109.7	104.9	114.2	109.7	113.6	119.9	125.7	131.6	126.6	140.4
Pens, pencils, office, and art supplies................	395	118.2	116.8	111.3	111.6	129.9	135.2	144.1	127.5	132.5	123.4	124.9
Costume jewelry and notions...........................	396	105.3	106.7	110.8	115.8	129.0	143.7	142.2	118.0	131.2	130.8	145.3
Miscellaneous manufactures..........................	399	106.5	109.2	109.5	107.7	106.1	108.1	112.8	109.4	108.5	114.9	115.9
Transportation												
Railroad transportation.....................................	4011	118.5	127.8	139.6	145.4	150.3	156.2	167.0	169.8	173.3	182.5	195.8
Trucking, except local [1].................................	4213	111.1	116.9	123.4	126.6	129.5	125.4	130.9	132.4	129.9	131.6	131.2
United states postal service	431	104.0	103.7	104.5	107.1	106.6	106.5	104.7	108.3	109.8	110.9	113.6
Air transportation..	4512,13,22(pts.)	92.9	92.5	96.9	100.2	105.7	108.6	111.1	111.6	108.4	109.1	110.7
Utilities												
Telephone communications...........................	481	113.3	119.8	127.7	135.5	142.2	148.1	159.5	160.9	170.1	186.3	201.3
Radio and television broadcasting...................	483	104.9	106.1	108.3	106.7	110.1	109.6	105.8	101.7	104.5	108.4	109.9
Cable and other pay TV services.....................	484	92.6	87.6	88.5	85.3	83.4	84.5	81.9	84.7	86.1	85.0	87.6
Electric utilities...	491,3(pts.)	110.1	113.4	115.2	24.1	50.5	80.8	116.8	150.0	159.6	162.0	169.6
Gas utilities..	492,3(pts.)	105.8	109.6	111.1	121.8	125.6	137.1	145.9	158.6	144.4	147.2	160.6
Trade												
Lumber and other building materials dealers........	521	104.3	102.3	106.4	111.4	118.9	117.8	121.6	121.8	134.2	143.0	144.2
Paint, glass, and wallpaper stores....................	523	106.8	100.4	107.6	114.2	127.8	130.9	133.5	134.8	163.5	165.1	170.1
Hardware stores..	525	115.3	108.7	115.2	113.9	121.2	115.6	119.5	119.0	137.9	147.6	145.7
Retail nurseries, lawn and garden supply stores...	526	84.7	89.3	101.2	107.1	117.0	117.4	136.4	127.5	133.7	150.4	154.5
Department stores.....................................	531	96.8	102.0	105.4	110.4	113.5	116.1	123.8	129.1	135.8	146.0	160.4
Variety stores...	533	154.6	159.0	173.9	191.9	197.9	212.4	240.4	260.1	271.2	315.0	330.9
Miscellaneous general merchandise stores..........	539	118.6	124.8	140.4	164.3	164.8	167.4	167.7	170.4	185.9	199.6	224.3
Grocery stores...	541	96.6	96.3	96.5	96.0	95.4	93.9	92.1	91.7	92.2	95.3	96.1
Meat and fish (seafood) markets......................	542	98.9	90.8	99.2	97.7	95.7	94.4	86.4	90.8	95.7	97.4	110.0
Retail bakeries..	546	91.2	96.7	96.5	86.5	85.3	83.0	75.9	67.6	68.1	83.1	88.4
New and used car dealers.............................	551	106.7	104.9	107.4	108.6	109.7	108.1	109.1	108.8	108.7	111.6	112.5
Auto and home supply stores.........................	553	103.7	100.2	101.6	100.8	105.3	109.1	108.2	108.1	113.1	115.5	119.3
Gasoline service stations..............................	554	103.0	104.8	110.2	115.9	121.1	127.2	126.1	126.1	133.9	141.7	139.0
Men's and boy's wear stores..........................	561	115.6	121.9	122.3	119.5	121.7	121.4	129.8	136.3	145.2	154.5	165.0
Women's clothing stores...............................	562	106.6	111.2	123.6	130.0	130.4	139.9	154.2	157.3	176.0	190.2	205.7
Family clothing stores..................................	565	107.8	111.5	118.6	121.5	127.7	141.8	146.9	150.2	153.1	155.9	160.4
Shoe stores..	566	107.9	107.8	115.5	117.3	130.7	139.2	151.9	148.4	145.0	152.9	160.2
Furniture and homefurnishings stores................	571	104.6	105.4	113.9	113.3	114.7	117.4	123.6	124.2	127.3	134.5	141.1
Household appliance stores............................	572	104.6	107.2	116.1	118.7	122.4	139.6	142.2	155.2	184.2	186.4	209.3
Radio, television, computer, and music stores......	573	120.8	129.3	139.3	153.8	178.2	198.1	206.6	216.8	258.3	309.1	359.4
Eating and drinking places............................	581	104.5	103.8	103.4	103.8	102.1	102.0	100.6	101.6	102.0	104.0	107.3
Drug and proprietary stores...........................	591	106.3	108.0	107.6	109.6	109.9	111.1	113.9	119.8	125.7	129.8	136.9
Liquor stores...	592	105.9	106.9	109.6	101.8	100.1	104.7	113.8	109.9	116.5	114.5	127.7
Used merchandise stores..............................	593	103.0	102.3	115.7	116.7	119.5	120.6	132.6	140.3	163.6	183.2	216.7
Miscellaneous shopping goods stores................	594	107.4	109.3	107.9	111.7	117.3	123.2	125.3	129.4	138.7	143.7	150.6
Nonstore retailers......................................	596	111.1	112.5	126.5	132.2	149.0	152.5	173.5	186.8	208.3	220.6	263.2
Fuel dealers...	598	84.6	85.3	84.3	91.9	99.0	111.4	112.5	109.1	105.8	115.2	117.3
Retail stores, n.e.c.....................................	599	114.5	104.0	112.5	118.1	125.8	127.0	140.2	147.8	157.4	162.5	168.1
Finance and services												
Commercial banks.....................................	602	107.7	110.1	111.0	118.5	121.7	126.4	129.7	133.0	132.6	135.9	143.2
Hotels and motels......................................	701	96.2	99.3	108.0	106.5	109.9	110.5	110.0	108.2	108.2	109.9	114.1
Laundry, cleaning, and garment services............	721	102.3	99.9	99.3	99.9	105.0	106.6	109.8	109.0	116.0	120.8	123.6
Photographic studios, portrait........................	722	98.2	92.1	95.8	101.8	108.3	116.2	110.7	114.1	121.6	107.7	112.0
Beauty shops...	723	97.5	95.8	100.9	97.0	101.1	104.8	107.6	108.5	110.5	113.4	114.5
Barber shops..	724	100.7	94.9	113.2	121.9	118.8	115.7	128.8	150.4	157.4	132.8	129.9
Funeral services and crematories....................	726	91.2	89.9	103.8	98.7	104.3	100.2	97.6	101.9	104.2	100.2	93.9
Automotive repair shops...............................	753	107.9	100.1	105.1	105.7	114.3	121.6	116.1	117.2	124.9	126.4	128.5
Motion picture theaters................................	783	118.1	118.2	114.8	113.8	110.4	105.0	104.1	103.4	106.1	108.7	112.3

[*] Refers to output per employee.

[**] Refers to output per full-time equivalent employee year on fiscal basis.

n.e.c. = not elsewhere classified

47. Unemployment rates, approximating U.S. concepts, in nine countries, quarterly data seasonally adjusted

Country	Annual average		2000				2001			
	2000	2001	I	II	III	IV	I	II	III	IV
United States........	4.0	4.8	4.0	4.0	4.1	4.0	4.2	4.5	4.8	5.6
Canada................	6.1	6.4	6.1	6.1	6.1	6.1	6.2	6.3	6.4	6.8
Australia.............	6.3	6.7	6.5	6.4	6.1	6.2	6.5	6.9	6.8	6.8
Japan[1]................	4.8	5.1	4.8	4.7	4.7	4.8	4.8	4.9	5.2	5.5
France[1]...............	9.4	8.7	9.9	9.5	9.5	9.0	8.6	8.5	6.7	8.9
Germany[1]...........	8.3	–	8.4	8.3	8.2	8.1	–	–	–	–
Italy[1,2]................	10.7	9.6	11.2	10.9	10.5	10.1	10.0	9.7	9.5	9.3
Sweden[1].............	5.8	5.0	6.6	6.0	5.6	5.2	5.1	5.0	5.0	5.1
United Kingdom[1]...	5.5	–	5.8	5.5	5.4	5.3	5.1	5.0	5.1	–

[1] Preliminary for 2000 for Japan, France, Germany (unified), Italy, and Sweden and for 1999 onward for the United Kingdom.

[2] Quarterly rates are for the first month of the quarter.

NOTE: Quarterly figures for France and Germany are calculated by applying annual adjustment factors to current published data, and therefore should be viewed as less precise in-dicators of unemployment under U.S. concepts than the annual figures. See "Notes on the data" for information on breaks in series. For further qualifications and historical data, see *Comparative Civilian Labor Force Statistics, Ten Countries, 1959–2000* (Bureau of Labor Statistics, Mar. 16, 2001).

Dash indicates data not available.

48. Annual data: Employment status of the working-age population, approximating U.S. concepts, 10 countries

[Numbers in thousands]

Employment status and country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Civilian labor force										
United States[1]	128,105	129,200	131,056	132,304	133,943	136,297	137,673	139,368	140,863	141,815
Canada	144,177	14,308	14,400	14,517	14,669	14,958	15,237	15,536	15,789	16,027
Australia	8,557	8,613	8,771	8,995	9,115	9,204	9,339	9,466	9,687	9,817
Japan	65,040	65,470	65,780	65,990	66,450	67,200	67,240	67,090	66,990	66,870
France	24,570	24,640	24,780	24,830	25,090	25,210	25,520	25,830	25,980	–
Germany[2]	39,040	39,140	39,210	39,100	39,180	39,480	39,520	39,630	–	–
Italy	22,910	22,570	22,450	22,460	22,570	22,680	22,960	23,130	23,340	23,540
Netherlands	6,950	7,100	7,190	7,260	7,370	7,530	7,690	7,900	8,050	–
Sweden	4,520	4,443	4,418	4,460	4,459	4,418	4,402	4,430	4,489	4,537
United Kingdom	28,410	28,440	28,440	28,560	28,720	28,910	29,040	29,300	29,450	–
Participation rate[3]										
United States1	66.4	66.3	66.6	66.6	66.8	67.1	67.1	67.1	67.2	66.9
Canada	65.9	65.5	65.2	64.9	64.7	65.0	65.4	65.8	65.9	66.0
Australia	63.9	63.5	63.9	64.6	64.6	64.3	64.3	64.2	64.7	64.7
Japan	63.4	63.3	63.1	62.9	63.0	63.2	62.8	62.4	62.0	61.6
France	55.9	55.8	55.8	55.6	55.8	55.7	56.1	56.4	56.4	–
Germany[2]	58.3	58.0	57.6	57.3	57.4	57.7	57.7	57.9	–	–
Italy	47.5	47.9	47.3	47.1	47.1	47.2	47.6	47.8	48.1	–
Netherlands	57.8	58.6	59	59.2	59.8	60.8	61.7	62.8	63.5	–
Sweden	65.7	64.5	63.7	64.1	64	63.3	62.8	62.8	63.8	64.2
United Kingdom	63.1	62.8	62.7	62.7	62.8	62.9	62.9	63.2	63.3	–
Employed										
United States[1]	118,492	120,259	123,060	124,900	126,708	129,558	131,463	133,488	135,208	135,073
Canada	12,672	12,770	13,027	13,271	13,380	13,705	14,068	14,456	14,827	14,997
Australia	7,660	7,699	7,942	8,256	8,364	8,444	8,618	8,808	9,068	9,157
Japan	63,620	63,810	63,860	63,890	64,200	64,900	64,450	63,920	63,790	63,470
France	22,020	21,740	21,720	21,910	21,960	22,090	22,510	22,940	23,530	–
Germany[2]	36,420	36,030	35,890	35,900	35,680	35,570	35,830	36,170	–	–
Italy	21,230	20,270	19,940	19,820	19,920	19,990	20,210	20,460	20,840	21,280
Netherlands	6,560	6,630	6,670	6,760	6,900	7,130	7,380	7,640	7,810	–
Sweden	4,265	4,028	3,992	4,056	4,019	3,973	4,034	4,117	4,229	4,309
United Kingdom	25,530	25,450	25,720	26,070	26,380	26,880	27,210	27,530	27,830	–
Employment-population ratio[4]										
United States[1]	61.5	61.7	62.5	62.9	63.2	63.8	64.1	64.3	64.5	63.8
Canada	58.9	58.5	59.0	59.4	59.1	59.7	60.4	61.3	62.1	61.9
Australia	57.2	56.8	57.8	59.2	59.3	59.0	59.3	59.8	60.6	60.3
Japan	62.0	61.7	61.3	60.9	60.9	61.0	60.2	59.4	59.0	58.4
France	50.1	49.2	48.9	49.0	48.8	48.8	49.5	50.1	51.1	–
Germany[2]	54.4	53.4	52.8	52.6	52.2	52.0	52.3	52.8	–	–
Italy	44.0	43.0	42.0	41.5	41.6	41.6	41.9	42.3	42.9	–
Netherlands	54.4	54.7	54.7	55.1	56.0	57.5	59.2	60.8	61.6	–
Sweden	62.0	58.5	57.6	58.3	57.7	56.9	57.6	58.4	60.1	61.0
United Kingdom	56.7	56.2	56.7	57.2	57.6	58.5	58.9	59.8	59.8	–
Unemployed										
United States[1]	9,613	8,940	7,996	7,404	7,236	6,739	6,210	5,880	5,655	6,742
Canada	1,505	1,539	1,373	1,246	1,289	1,252	1,169	1,080	962	1,031
Australia	897	314	829	739	739	751	760	658	611	661
Japan	1,420	1,660	1,920	2,100	2,250	2,300	2,790	3,170	3,200	3,400
France	2,550	2,900	3,060	2,920	3,130	3,120	3,020	2,890	2,450	–
Germany[2]	2,620	3,110	3,320	3,200	3,500	3,910	3,690	3,460	–	–
Italy	1,680	2,300	2,510	2,640	2,650	2,690	2,750	2,670	2,500	2,270
Netherlands	390	470	520	500	470	400	310	270	240	–
Sweden	255	415	426	404	440	445	368	313	260	228
United Kingdom	2,880	2,980	2,720	2,490	2,340	2,030	1,830	1,770	1,620	–
Unemployment rate										
United States[1]	7.5	6.9	6.1	5.6	5.4	4.9	4.5	4.2	4.0	4.8
Canada	10.6	10.8	9.5	8.6	8.8	8.4	7.7	7.0	6.1	6.4
Australia	10.5	10.6	9.4	8.2	8.2	8.3	7.7	7.0	6.3	6.7
Japan	2.2	2.5	2.9	3.2	3.4	3.4	4.1	4.7	4.8	5.1
France	10.4	11.8	12.3	11.8	12.5	12.4	11.8	11.2	9.4	8.7
Germany[2]	6.7	7.9	8.5	8.2	8.9	9.9	9.3	8.7	–	–
Italy	7.3	10.2	11.2	11.8	11.7	11.9	12.0	11.5	10.7	9.6
Netherlands	5.6	6.6	7.2	6.2	6.4	5.3	4.0	3.4	3.0	–
Sweden	5.6	9.3	9.6	9.1	9.9	10.1	8.4	7.1	5.8	5.0
United Kingdom	10.1	10.5	9.6	8.7	8.1	7.0	6.3	6.0	5.5	–

[1] Data for 1994 are not directly comparable with data for 1993 and earlier years. For additional information, see the box note under "Employment and Unemployment Data" in the notes to this section.

[2] Data from 1991 onward refer to unified Germany. See Comparative Civilian Labor Force Statistics, Ten Countries, 1959–2000, Mar. 16, 2001, on the Internet at http://stats.bls.gov/flsdata.htm.

[3] Labor force as a percent of the working-age population.

[4] Employment as a percent of the working-age population.

NOTE: See Notes on the data for information on breaks in series for the United States, France, Germany, Italy, the Netherlands, and Sweden.

Dash indicates data are not available.

p = preliminary.

49. Annual indexes of manufacturing productivity and related measures, 12 countries

[1992 = 100]

Item and country	1960	1970	1980	1989	1990	1991	1993	1994	1995	1996	1997	1998	1999	2000
Output per hour														
United States	–	–	70.5	95.7	96.9	97.8	102.1	107.3	113.8	117.0	121.2	126.5	135.3	142.8
Canada	38.5	56.0	74.4	93.2	94.7	95.5	104.9	109.7	111.3	110.1	113.2	113.1	114.9	116.3
Japan	13.8	37.5	63.2	88.5	94.4	99.0	101.7	103.3	111.0	116.1	121.0	121.2	126.9	134.1
Belgium	18.0	32.9	65.4	96.9	96.8	99.1	102.5	108.4	113.2	117.0	127.0	129.2	129.5	133.4
Denmark	29.9	52.7	90.3	99.6	99.1	99.6	104.5	–						
France	21.9	43.0	66.6	91.9	93.6	96.9	100.6	108.6	114.7	115.3	123.8	129.5	132.9	141.1
Germany	29.2	52.0	77.2	94.6	99.0	99.0	101.6	110.1	113.2	116.8	122.4	126.7	128.5	–
Italy	22.5	42.2	70.8	91.3	93.9	95.9	101.8	106.1	111.2	110.8	113.7	113.1	113.5	117.8
Netherlands	18.5	37.9	68.8	96.9	98.5	99.6	101.6	113.2	118.2	120.2	122.3	125.0	128.5	133.8
Norway	37.0	58.3	76.7	94.6	96.6	97.5	100.6	101.4	102.0	102.0	103.0	103.6	103.1	104.2
Sweden	27.3	52.2	73.1	93.2	94.6	95.5	107.3	119.4	121.9	124.5	132.3	139.5	143.5	150.4
United Kingdom	30.0	43.2	54.3	86.2	89.1	93.8	103.9	107.1	104.9	103.8	105.2	106.9	111.6	117.6
Output														
United States	–	–	75.8	102.4	101.6	98.3	103.5	111.1	118.4	121.3	127.9	133.1	141.2	147.0
Canada	34.0	60.0	85.2	112.1	107.5	99.2	105.0	113.0	118.5	120.0	127.3	132.5	140.8	148.8
Japan	10.7	39.2	60.4	90.9	97.1	102.0	96.3	94.9	98.9	103.0	106.5	100.2	101.9	107.6
Belgium	30.7	57.6	78.2	99.1	101.0	100.7	97.0	101.4	104.2	106.6	113.8	116.4	118.0	122.2
Denmark	40.8	68.0	91.3	104.3	102.7	101.7	99.0	109.3	114.7	109.7	118.5	120.8	119.8	125.8
France	31.0	64.1	88.7	97.2	99.1	99.8	95.7	100.3	104.9	104.6	109.7	115.0	117.3	121.2
Germany	41.5	70.9	85.3	94.0	99.1	102.3	92.5	95.2	95.3	93.5	96.3	100.9	102.2	–
Italy	23.0	48.1	84.4	98.3	99.4	99.3	96.5	102.4	107.2	105.4	108.8	110.5	110.2	113.9
Netherlands	31.5	59.1	76.8	96.6	99.9	100.4	98.4	104.6	108.1	108.7	111.5	114.8	118.1	123.7
Norway	57.0	89.9	103.6	101.3	100.2	98.3	102.7	106.7	109.0	110.1	115.7	117.7	114.0	110.9
Sweden	45.9	80.7	90.7	110.9	110.1	104.1	101.9	117.1	128.4	131.1	138.0	147.6	153.6	163.4
United Kingdom	67.3	90.2	87.2	105.5	105.3	100.0	101.4	106.1	107.8	108.5	109.9	110.8	111.1	113.3
Total hours														
United States	92.1	104.4	107.5	107.1	104.8	100.4	101.4	103.6	104.0	103.6	105.5	105.2	104.3	102.9
Canada	88.3	107.1	114.6	120.2	113.5	103.9	100.1	103.0	106.4	109.0	112.4	117.1	122.6	128.0
Japan	77.8	104.4	95.6	102.7	102.9	103.1	94.7	91.9	89.1	88.7	88.0	82.7	80.3	80.2
Belgium	170.7	174.7	119.7	102.3	104.3	101.5	94.7	93.6	92.0	91.1	89.6	90.1	91.1	91.7
Denmark	136.5	129.0	101.1	104.7	103.7	102.1	94.8	–	–	–	–	–	–	–
France	141.2	148.9	133.2	105.8	105.9	103.1	95.1	92.4	91.5	90.7	88.6	88.8	88.3	85.9
Germany	142.3	136.3	110.5	99.3	100.1	103.3	91.0	86.5	84.2	80.1	78.7	79.6	79.5	–
Italy	102.3	113.8	119.3	107.6	105.9	103.6	94.9	96.5	96.4	95.1	95.7	97.7	97.1	96.7
Netherlands	170.5	156.1	111.7	99.7	101.4	100.9	96.8	92.4	91.5	90.4	91.1	91.8	92.0	92.5
Norway	154.1	154.3	135.0	107.1	103.7	100.8	102.1	105.2	106.8	107.9	112.3	113.6	110.6	106.4
Sweden	168.3	154.7	124.0	119.0	116.4	109.0	94.9	98.1	105.3	105.3	104.3	105.8	107.1	108.6
United Kingdom	224.6	208.8	160.5	122.4	118.1	106.6	97.6	99.1	102.7	104.5	104.5	103.6	99.5	96.3
Compensation per hour														
United States	14.9	23.7	55.6	86.6	90.8	95.6	102.7	105.6	107.9	109.4	111.4	117.4	122.1	130.7
Canada	10.0	17.1	47.6	82.6	88.3	95.0	102.0	103.7	106.0	107.0	109.3	111.6	113.1	117.0
Japan	4.3	16.4	58.5	84.0	90.5	96.4	102.8	104.9	108.3	109.2	112.9	115.8	115.2	114.5
Belgium	5.4	13.7	52.5	85.9	90.1	97.3	104.8	106.1	109.2	110.9	114.9	116.6	118.3	121.1
Denmark	4.6	13.3	49.6	87.7	92.7	95.9	104.6	–	–	–	–	–	–	–
France	4.3	10.3	40.8	86.0	90.6	96.2	103.1	105.6	108.5	110.3	113.1	115.7	118.7	125.7
Germany	8.1	20.7	53.6	83.2	89.4	92.1	106.1	112.3	118.5	125.2	128.0	128.9	130.8	–
Italy	1.7	5.0	29.0	77.4	85.8	94.2	106.1	108.1	114.6	122.0	127.2	125.6	129.4	133.6
Netherlands	6.4	20.2	64.4	88.6	90.9	95.3	103.8	108.2	110.7	113.0	115.8	120.6	124.0	131.0
Norway	4.7	11.8	39.0	87.2	92.3	97.5	101.5	104.4	109.2	113.6	118.7	126.1	133.4	140.1
Sweden	4.1	10.7	37.3	79.4	87.8	95.5	97.4	100.0	106.5	114.4	119.4	124.4	127.5	130.7
United Kingdom	3.0	6.1	32.1	73.8	82.9	93.8	104.7	106.8	107.9	109.5	113.8	120.5	129.6	134.7
Unit labor costs: National currency basis														
United States	–	–	78.8	90.5	93.7	97.6	100.6	98.5	94.8	93.5	91.9	92.8	90.2	91.5
Canada	25.9	30.5	63.9	88.6	93.3	99.5	97.2	94.5	95.2	97.2	96.5	98.6	98.4	100.6
Japan	31.3	43.8	92.5	94.9	95.9	97.4	101.1	101.5	97.6	94.0	93.3	95.5	90.8	85.4
Belgium	30.1	41.7	80.3	88.7	93.0	98.1	102.3	97.9	96.4	94.7	90.5	90.2	91.4	90.8
Denmark	15.4	25.2	55.0	88.1	93.6	96.3	100.1	93.0	93.8	100.9	96.9	98.7	101.9	100.2
France	19.4	24.0	61.3	93.5	96.8	99.3	102.4	97.3	94.6	95.7	91.4	89.4	89.3	89.1
Germany	27.8	39.8	69.4	87.9	90.3	93.1	104.5	102.0	104.7	107.2	104.6	101.8	101.8	101.8
Italy	7.5	11.9	41.0	84.8	91.5	98.2	104.3	101.9	103.0	110.0	111.9	111.1	1114.0	113.4
Netherlands	34.6	53.3	93.7	91.4	92.3	95.6	102.1	95.6	93.7	94.0	94.7	96.5	96.6	97.9
Norway	12.8	20.3	50.8	92.2	95.6	100.0	100.9	102.9	107.0	111.4	115.2	121.7	129.5	134.5
Sweden	15.0	20.6	51.0	85.1	92.8	100.0	90.8	83.8	87.4	91.9	90.2	89.2	88.8	86.9
United Kingdom	9.8	14.1	59.0	85.6	93.0	100.1	100.8	99.7	102.9	105.5	108.2	112.7	116.1	114.5
Unit labor costs: U.S. dollar basis														
United States	–	–	78.8	90.5	93.7	97.6	100.6	98.5	94.8	93.5	91.9	92.8	90.2	91.5
Canada	32.2	35.3	66.1	90.4	95.6	104.9	91.0	83.6	83.8	86.1	84.2	80.4	80.0	81.8
Japan	11.0	15.5	51.8	87.1	83.8	91.7	115.4	125.9	131.7	109.6	97.7	92.4	101.2	100.4
Belgium	19.4	27.0	88.3	72.3	89.5	92.3	95.1	94.2	105.2	98.4	81.2	79.9	77.6	66.8
Denmark	13.5	20.3	58.9	72.6	91.3	90.8	93.2	88.3	101.1	105.0	88.6	88.9	88.0	74.8
France	20.9	23.1	76.7	77.6	94.0	93.1	95.7	92.8	100.5	99.0	82.8	80.2	76.8	66.4
Germany	10.4	17.1	59.6	73.0	87.3	87.5	98.6	98.2	114.1	111.3	94.1	90.3	86.6	86.6
Italy	15.0	23.3	59.0	76.1	94.1	97.5	81.6	77.9	77.9	87.9	80.9	78.8	77.3	66.6
Netherlands	16.1	25.9	82.9	75.8	89.1	89.9	96.6	92.4	102.7	98.1	85.3	85.5	82.1	72.1
Norway	11.2	17.6	63.9	82.9	95.0	95.7	88.3	90.7	105.0	107.1	101.0	100.2	103.1	94.8
Sweden	16.9	23.1	70.2	76.8	91.3	96.3	67.8	63.2	71.3	79.8	68.8	65.3	62.5	55.2
United Kingdom	15.6	19.1	77.7	79.4	93.9	100.1	85.7	86.5	92.0	93.2	100.3	105.8	106.3	98.3

NOTE: Data for Germany for years before 1992 are for the former West Germany. Data for 1992 onward are for unified Germany. Dash indicates data not available.

50. Occupational injury and illness rates by industry,[1] United States

Industry and type of case[2]	1989[1]	1990	1991	1992	1993[4]	1994[4]	1995[4]	1996[4]	1997[4]	1998[4]	1999[4]	2000[4]
PRIVATE SECTOR[5]												
Total cases	8.6	8.8	8.4	8.9	8.5	8.4	8.1	7.4	7.1	6.7	6.3	6.1
Lost workday cases	4.0	4.1	3.9	3.9	3.8	3.8	3.6	3.4	3.3	3.1	3.0	3.0
Lost workdays	78.7	84.0	86.5	93.8	–	–	–	–	–	–	–	–
Agriculture, forestry, and fishing[5]												
Total cases	10.9	11.6	10.8	11.6	11.2	10.0	9.7	8.7	8.4	7.9	7.3	7.1
Lost workday cases	5.7	5.9	5.4	5.4	5.0	4.7	4.3	3.9	4.1	3.9	3.4	3.6
Lost workdays	100.9	112.2	108.3	126.9	–	–	–	–	–	–	–	–
Mining												
Total cases	8.5	8.3	7.4	7.3	6.8	6.3	6.2	5.4	5.9	4.9	4.4	4.7
Lost workday cases	4.8	5.0	4.5	4.1	3.9	3.9	3.9	3.2	3.7	2.9	2.7	3.0
Lost workdays	137.2	119.5	129.6	204.7	–	–	–	–	–	–	–	–
Construction												
Total cases	14.3	14.2	13.0	13.1	12.2	11.8	10.6	9.9	9.5	8.8	8.6	8.3
Lost workday cases	6.8	6.7	6.1	5.8	5.5	5.5	4.9	4.5	4.4	4.0	4.2	4.1
Lost workdays	143.3	147.9	148.1	161.9	–	–	–	–	–	–	–	–
General building contractors:												
Total cases	13.9	13.4	12.0	12.2	11.5	10.9	9.8	9.0	8.5	8.4	8.0	7.8
Lost workday cases	6.5	6.4	5.5	5.4	5.1	5.1	4.4	4.0	3.7	3.9	3.7	3.9
Lost workdays	137.3	137.6	132.0	142.7	–	–	–	–	–	–	–	–
Heavy construction, except building:												
Total cases	13.8	13.8	12.8	12.1	11.1	10.2	9.9	9.0	8.7	8.2	7.8	7.6
Lost workday cases	6.5	6.3	6.0	5.4	5.1	5.0	4.8	4.3	4.3	4.1	3.8	3.7
Lost workdays	147.1	144.6	160.1	165.8	–	–	–	–	–	–	–	–
Special trades contractors:												
Total cases	14.6	14.7	13.5	13.8	12.8	12.5	11.1	10.4	10.0	9.1	8.9	8.6
Lost workday cases	6.9	6.9	6.3	6.1	5.8	5.8	5.0	4.8	4.7	4.1	4.4	4.3
Lost workdays	144.9	153.1	151.3	168.3	–	–	–	–	–	–	–	–
Manufacturing												
Total cases	13.1	13.2	12.7	12.5	12.1	12.2	11.6	10.6	10.3	9.7	9.2	9.0
Lost workday cases	5.8	5.8	5.6	5.4	5.3	5.5	5.3	4.9	4.8	4.7	4.6	4.5
Lost workdays	113.0	120.7	121.5	124.6	–	–	–	–	–	–	–	–
Durable goods:												
Total cases	14.1	14.2	13.6	13.4	13.1	13.5	12.8	11.6	11.3	10.7	10.1	–
Lost workday cases	6.0	6.0	5.7	5.5	5.4	5.7	5.6	5.1	5.1	5.0	4.8	–
Lost workdays	116.5	123.3	122.9	126.7	–	–	–	–	–	–	–	–
Lumber and wood products:												
Total cases	18.4	18.1	16.8	16.3	15.9	15.7	14.9	14.2	13.5	13.2	13.0	12.1
Lost workday cases	9.4	8.8	8.3	7.6	7.6	7.7	7.0	6.8	6.5	6.8	6.7	6.1
Lost workdays	177.5	172.5	172.0	165.8	–	–	–	–	–	–	–	–
Furniture and fixtures:												
Total cases	16.1	16.9	15.9	14.8	14.6	15.0	13.9	12.2	12.0	11.4	11.5	11.2
Lost workday cases	7.2	7.8	7.2	6.6	6.5	7.0	6.4	5.4	5.8	5.7	5.9	5.9
Lost workdays	–	–	–	128.4	–	–	–	–	–	–	–	–
Stone, clay, and glass products:												
Total cases	15.5	15.4	14.8	13.6	13.8	13.2	12.3	12.4	11.8	11.8	10.7	10.4
Lost workday cases	7.4	7.3	6.8	6.1	6.3	6.5	5.7	6.0	5.7	6.0	5.4	5.5
Lost workdays	149.8	160.5	156.0	152.2	–	–	–	–	–	–	–	–
Primary metal industries:												
Total cases	18.7	19.0	17.7	17.5	17.0	16.8	16.5	15.0	15.0	14.0	12.9	12.6
Lost workday cases	8.1	8.1	7.4	7.1	7.3	7.2	7.2	6.8	7.2	7.0	6.3	6.3
Lost workdays	168.3	180.2	169.1	175.5	–	–	–	–	–	–	–	–
Fabricated metal products:												
Total cases	18.5	18.7	17.4	16.8	16.2	16.4	15.8	14.4	14.2	13.9	12.6	11.9
Lost workday cases	7.9	7.9	7.1	6.6	6.7	6.7	6.9	6.2	6.4	6.5	6.0	5.5
Lost workdays	147.6	155.7	146.6	144.0	–	–	–	–	–	–	–	–
Industrial machinery and equipment:												
Total cases	12.1	12.0	11.2	11.1	11.1	11.6	11.2	9.9	10.0	9.5	8.5	8.2
Lost workday cases	4.8	4.7	4.4	4.2	4.2	4.4	4.4	4.0	4.1	4.0	3.7	3.6
Lost workdays	86.8	88.9	86.6	87.7	–	–	–	–	–	–	–	–
Electronic and other electrical equipment:												
Total cases	9.1	9.1	8.6	8.4	8.3	8.3	7.6	6.8	6.6	5.9	5.7	5.7
Lost workday cases	3.9	3.8	3.7	3.6	3.5	3.6	3.3	3.1	3.1	2.8	2.8	2.9
Lost workdays	77.5	79.4	83.0	81.2	–	–	–	–	–	–	–	–
Transportation equipment:												
Total cases	17.7	17.8	18.3	18.7	18.5	19.6	18.6	16.3	15.4	14.6	13.7	13.7
Lost workday cases	6.8	6.9	7.0	7.1	7.1	7.8	7.9	7.0	6.6	6.6	6.4	6.3
Lost workdays	138.6	153.7	166.1	186.6	–	–	–	–	–	–	–	–
Instruments and related products:												
Total cases	5.6	5.9	6.0	5.9	5.6	5.9	5.3	5.1	4.8	4.0	4.0	4.5
Lost workday cases	2.5	2.7	2.7	2.7	2.5	2.7	2.4	2.3	2.3	1.9	1.8	2.2
Lost workdays	55.4	57.8	64.4	65.3	–	–	–	–	–	–	–	–
Miscellaneous manufacturing industries:												
Total cases	11.1	11.3	11.3	10.7	10.0	9.9	9.1	9.5	8.9	8.1	8.4	7.2
Lost workday cases	5.1	5.1	5.1	5.0	4.6	4.5	4.3	4.4	4.2	3.9	4.0	3.6
Lost workdays	97.6	113.1	104.0	108.2	–	–	–	–	–	–	–	–

See footnotes at end of table.

50. Continued—Occupational injury and illness rates by industry,[1] United States

Industry and type of case[2]	1989[1]	1990	1991	1992	1993[4]	1994[4]	1995[4]	1996[4]	1997[4]	1998[4]	1999[4]	2000[4]
Nondurable goods:												
Total cases	11.6	11.7	11.5	11.3	10.7	10.5	9.9	9.2	8.8	8.2	7.8	–
Lost workday cases	5.5	5.6	5.5	5.3	5.0	5.1	4.9	4.6	4.4	4.3	4.2	–
Lost workdays	107.8	116.9	119.7	121.8	–	–	–	–	–	–	–	–
Food and kindred products:												
Total cases	18.5	20.0	19.5	18.8	17.6	17.1	16.3	15.0	14.5	13.6	12.7	12.4
Lost workday cases	9.3	9.9	9.9	9.5	8.9	9.2	8.7	8.0	8.0	7.5	7.3	7.3
Lost workdays	174.7	202.6	207.2	211.9	–	–	–	–	–	–	–	–
Tobacco products:												
Total cases	8.7	7.7	6.4	6.0	5.8	5.3	5.6	6.7	5.9	6.4	5.5	6.2
Lost workday cases	3.4	3.2	2.8	2.4	2.3	2.4	2.6	2.8	2.7	3.4	2.2	3.1
Lost workdays	64.2	62.3	52.0	42.9	–	–	–	–	–	–	–	–
Textile mill products:												
Total cases	10.3	9.6	10.1	9.9	9.7	8.7	8.2	7.8	6.7	7.4	6.4	6.0
Lost workday cases	4.2	4.0	4.4	4.2	4.1	4.0	4.1	3.6	3.1	3.4	3.2	3.2
Lost workdays	81.4	85.1	88.3	87.1	–	–	–	–	–	–	–	–
Apparel and other textile products:												
Total cases	8.6	8.8	9.2	9.5	9.0	8.9	8.2	7.4	7.0	6.2	5.8	6.1
Lost workday cases	3.8	3.9	4.2	4.0	3.8	3.9	3.6	3.3	3.1	2.6	2.8	3.0
Lost workdays	80.5	92.1	99.9	104.6	–	–	–	–	–	–	–	–
Paper and allied products:												
Total cases	12.7	12.1	11.2	11.0	9.9	9.6	8.5	7.9	7.3	7.1	7.0	6.5
Lost workday cases	5.8	5.5	5.0	5.0	4.6	4.5	4.2	3.8	3.7	3.7	3.7	3.4
Lost workdays	132.9	124.8	122.7	125.9	–	–	–	–	–	–	–	–
Printing and publishing:												
Total cases	6.9	6.9	6.7	7.3	6.9	6.7	6.4	6.0	5.7	5.4	5.0	5.1
Lost workday cases	3.3	3.3	3.2	3.2	3.1	3.0	3.0	2.8	2.7	2.8	2.6	2.6
Lost workdays	63.8	69.8	74.5	74.8	–	–	–	–	–	–	–	–
Chemicals and allied products:												
Total cases	7.0	6.5	6.4	6.0	5.9	5.7	5.5	4.8	4.8	4.2	4.4	4.2
Lost workday cases	3.2	3.1	3.1	2.8	2.7	2.8	2.7	2.4	2.3	2.1	2.3	2.2
Lost workdays	63.4	61.6	62.4	64.2	–	–	–	–	–	–	–	–
Petroleum and coal products:												
Total cases	6.6	6.6	6.2	5.9	5.2	4.7	4.8	4.6	4.3	3.9	4.1	3.7
Lost workday cases	3.3	3.1	2.9	2.8	2.5	2.3	2.4	2.5	2.2	1.8	1.8	1.9
Lost workdays	68.1	77.3	68.2	71.2	–	–	–	–	–	–	–	–
Rubber and miscellaneous plastics products:												
Total cases	16.2	16.2	15.1	14.5	13.9	14.0	12.9	12.3	11.9	11.2	10.1	10.7
Lost workday cases	8.0	7.8	7.2	6.8	6.5	6.7	6.5	6.3	5.8	5.8	5.5	5.8
Lost workdays	147.2	151.3	150.9	153.3	–	–	–	–	–	–	–	–
Leather and leather products:												
Total cases	13.6	12.1	12.5	12.1	12.1	12.0	11.4	10.7	10.6	9.8	10.3	9.0
Lost workday cases	6.5	5.9	5.9	5.4	5.5	5.3	4.8	4.5	4.3	4.5	5.0	4.3
Lost workdays	130.4	152.3	140.8	128.5	–	–	–	–	–	–	–	–
Transportation and public utilities												
Total cases	9.2	9.6	9.3	9.1	9.5	9.3	9.1	8.7	8.2	7.3	7.3	–
Lost workday cases	5.3	5.5	5.4	5.1	5.4	5.5	5.2	5.1	4.8	4.3	4.4	4.3
Lost workdays	121.5	134.1	140.0	144.0	–	–	–	–	–	–	–	–
Wholesale and retail trade												
Total cases	8.0	7.9	7.6	8.4	8.1	7.9	7.5	6.8	6.7	6.5	6.1	–
Lost workday cases	3.6	3.5	3.4	3.5	3.4	3.4	3.2	2.9	3.0	2.8	2.7	–
Lost workdays	63.5	65.6	72.0	80.1	–	–	–	–	–	–	–	–
Wholesale trade:												
Total cases	7.7	7.4	7.2	7.6	7.8	7.7	7.5	6.6	6.5	6.5	6.3	5.8
Lost workday cases	4.0	3.7	3.7	3.6	3.7	3.8	3.6	3.4	3.2	3.3	3.3	–
Lost workdays	71.9	71.5	79.2	82.4	–	–	–	–	–	–	–	–
Retail trade:												
Total cases	8.1	8.1	7.7	8.7	8.2	7.9	7.5	6.9	6.8	6.5	6.1	–
Lost workday cases	3.4	3.4	3.3	3.4	3.3	3.3	3.0	2.8	2.9	2.7	2.5	–
Lost workdays	60.0	63.2	69.1	79.2	–	–	–	–	–	–	–	–
Finance, insurance, and real estate												
Total cases	2.0	2.4	2.4	2.9	2.9	2.7	2.6	2.4	2.2	.7	1.8	1.9
Lost workday cases	.9	1.1	1.1	1.2	1.2	1.1	1.0	.9	.9	.5	.8	.8
Lost workdays	17.6	27.3	24.1	32.9	–	–	–	–	–	–	–	–
Services												
Total cases	5.5	6.0	6.2	7.1	6.7	6.5	6.4	6.0	5.6	5.2	4.9	4.9
Lost workday cases	2.7	2.8	2.8	3.0	2.8	2.8	2.8	2.6	2.5	2.4	2.2	2.2
Lost workdays	51.2	56.4	60.0	68.6	–	–	–	–	–	–	–	–

[1] Data for 1989 and subsequent years are based on the *Standard Industrial Classification Manual*, 1987 Edition. For this reason, they are not strictly comparable with data for the years 1985–88, which were based on the *Standard Industrial Classification Manual*, 1972 Edition, 1977 Supplement.

[2] Beginning with the 1992 survey, the annual survey measures only nonfatal injuries and illnesses, while past surveys covered both fatal and nonfatal incidents. To better address fatalities, a basic element of workplace safety, BLS implemented the Census of Fatal Occupational Injuries.

[3] The incidence rates represent the number of injuries and illnesses or lost workdays per 100 full-time workers and were calculated as (N/EH) X 200,000, where:

N = number of injuries and illnesses or lost workdays;

EH = total hours worked by all employees during the calendar year; and

200,000 = base for 100 full-time equivalent workers (working 40 hours per week, 50 weeks per year).

[4] Beginning with the 1993 survey, lost workday estimates will not be generated. As of 1992, BLS began generating percent distributions and the median number of days away from work by industry and for groups of workers sustaining similar work disabilities.

[5] Excludes farms with fewer than 11 employees since 1976.

Dash indicates data not available.

51. Fatal occupational injuries by event or exposure, 1994-2000

Event or exposure[1]	Fatalities			
	1994-98	1999[2]	2000	
	Average	Number	Number	Percent
Total..	6,280	6,054	5,915	100
Transportation incidents..	2,640	2,618	2,571	43
Highway incident...	1,374	1,496	1,363	23
Collision between vehicles, mobile equipment......................	662	714	694	12
Moving in same direction............................	113	129	136	2
Moving in opposite directions, oncoming.........................	240	270	243	4
Moving in intersection............................	136	161	153	3
Vehicle struck stationary object or equipment................	272	334	279	5
Noncollision incident..........................	368	390	356	6
Jackknifed or overturned—no collision...................	280	322	304	5
Nonhighway (farm, industrial premises) incident......................	387	352	399	7
Overturned....................	215	206	213	4
Aircraft..........	304	228	280	5
Worker struck by a vehicle..........................	382	377	370	6
Water vehicle incident...........	104	102	84	1
Railway..........	78	56	71	1
Assaults and violent acts.................................	1,168	909	929	16
Homicides...........................	923	651	677	11
Shooting..........................	748	509	533	9
Stabbing..........................	68	62	66	1
Other, including bombing...................	107	80	78	1
Self-inflicted injuries.....................	215	218	220	4
Contact with objects and equipment.........................	984	1,030	1,005	17
Struck by object.........................	564	585	570	10
Struck by falling object............................	364	358	357	6
Struck by flying object............................	60	55	61	1
Caught in or compressed by equipment or objects..................	281	302	294	5
Caught in running equipment or machinery...................	148	163	157	3
Caught in or crushed in collapsing materials........................	124	129	123	2
Falls....................	686	721	734	12
Fall to lower level............................	609	634	659	11
Fall from ladder...................	101	96	110	2
Fall from roof...................	146	153	150	3
Fall from scaffold, staging...................	89	92	85	2
Fall on same level...................	53	70	56	1
Exposure to harmful substances or environments................	583	533	480	8
Contact with electric current............................	322	280	256	4
Contact with overhead power lines...........................	136	125	128	2
Contact with temperature extremes.......................	45	51	29	–
Exposure to caustic, noxious, or allergenic substances...............	118	108	100	2
Inhalation of substances........................	66	55	48	1
Oxygen deficiency........................	96	92	93	2
Drowning, submersion........................	77	75	74	1
Fires and explosions	199	216	177	3
Other events or exposures[3]..................	21	27	19	–

[1] Based on the 1992 BLS Occupational Injury and Illness Classification Structures.

[2] The BLS news release issued August 17, 2000, reported a total of 6,023 fatal work injuries for calendar year 1999. Since then, an additional 31 job-related fatalities were identified, bringing the total job-related fatality count for 1999 to 6,054.

[3] Includes the category "Bodily reaction and exertion."

NOTE: Totals for major categories may include sub-categories not shown separately. Percentages may not add to totals because of rounding. Dash indicates less than 0.5 percent.

Obtaining information from the Bureau of Labor Statistics

Office or Topic	Internet address	E-mail
Bureau of Labor Statistics Information services	http://www.bls.gov http://www.bls.gov/opub/	blsdata_staff@bls.gov

Employment and unemployment
  Employment, hours, and earnings:
    National
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  Labor force statistics:
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  UI-covered employment, wages
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  Mass layoffs
  Longitudinal data
	
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Prices and living conditions
  Consumer price indexes
  Producer price indexes)
  Import and export price indexes
  Consumer expenditures
	
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Compensation and working conditions
  National Compensation Survey:
    Employee benefits
    Employment cost trends
    Occupational compensation
  Occupational illnesses, injuries
  Fatal occupational injuries
  Collective bargaining
	
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	http://www.bls.gov/ebs/
	http://www.bls.gov/ect/
	http://www.bls.gov/ncs/
	http://www.bls.gov/iif/
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  Industry
  Multifactor
	
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Projections
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  Occupation
	
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	http://www.bls.gov/oco/
		
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Schedule of release dates for BLS statistical series

Series	Release date	Period covered	Release date	Period covered	Release date	Period covered	MLR table number
Employment situation	June 7	May	July 5	June	August 2	July	1; 4–24
U.S. Import and Export Price Indexes	June 12	May	July 10	June	August 7	July	38–42
Producer Price Indexes	June 13	May	July 11	June	August 8	July	2; 35–37
Consumer Price indexes	June 18	May	July 19	June	August 16	July	2; 32–34
Real earnings	June 18	May	July 19	June	August 16	July	14, 16
Employment Cost Indexes			July 25	2nd quarter			1–3; 25–28
Productivity and costs					August 9	2nd quarter	2; 43–46